Aastra BluStar™ 8000i Desktop Media Phone / Aastra BluStar™ for Conference Room

SIP Call Server Administrator Guide

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Welcome

The Aastra BluStar™ 8000i Desktop Media Phone and Aastra BluStar™ for Conference Room solutions are designed to enhance the way you communicate and collaborate. Offering true HD video conferencing, the two devices use the latest in video and communications technology to enable a natural high-quality video experience. With their advanced business collaboration features and applications, the BluStar 8000i and BluStar for Conference Room are productivity enhancing solutions that are intelligent, intuitive, and easy to use.

About this Guide

This guide explains how to the BluStar 8000i and BluStar for Conference Room in SIP Call Server mode, which offers generic Session Initiation Protocol (SIP) video phone functionality. This guide also provides information on the basic network setup, operation, and configuration of the BluStar 8000i and BluStar for Conference Room.

Note:

This guide will be updated periodically with new and/or updated information. For details on what features have been added or updated, please refer to the ***Aastra BluStar 8000i Desktop Media Phone / Aastra BluStar for Conference Room SIP Call Server Release Notes***.

Audience

This guide is for network administrators, system administrators, developers, and partners who need to understand how to operate and maintain the BluStar 8000i and BluStar for Conference Room on an open-standards SIP based VoIP deployment. It also provides some user-specific information.

This guide contains information that is at a technical level, more suitable for system or network administrators. A basic knowledge of SIP concepts and the Linux operating system is assumed.

Documentation

Shared documentation consists of the following:

- ***Aastra BluStar 8000i Desktop Media Phone / Aastra BluStar for Conference Room SIP Call Server Release Notes*** - Provides new features and documents issues resolved for the BluStar 8000i and BluStar for Conference Room in SIP Call Server mode.
- ***Aastra BluStar 8000i Desktop Media Phone / Aastra BluStar for Conference Room BAS-Mode Release Notes*** - Provides new features and documents issues resolved for the BluStar 8000i and BluStar for Conference Room in BAS mode.
- ***Aastra BluStar 8000i Desktop Media Phone / Aastra BluStar for Conference Room SIP Call Server Administrator Guide*** - Provides all of the configuration options available to configure and deploy the products in SIP Call Server mode.
- ***Aastra BluStar 8000i Desktop Media Phone / Aastra BluStar for Conference Room Room BAS-Mode Administrator Guide*** - Provides all of the information on how to configure and deploy the products in BAS mode.

BluStar 8000i documentation consists of the following:

- ***Aastra BluStar 8000i Desktop Media Phone Quick Start Guide*** - Contains installation and set-up instructions, general features and functions, and an overview of the terminal. The English, French, and German version is included in the box with the BluStar 8000i terminal. The quick start guide is also available in other languages and can be downloaded from http://www.aastra.com/document-library.htm.
- ***Aastra BluStar 8000i Desktop Media Phone SIP Call Server User Guide*** - Describes the most commonly used features and functions for an end user when utilizing the BluStar 8000i in SIP Call Server mode.
- ***Aastra BluStar 8000i Desktop Media Phone BAS-Mode User Guide*** - Describes the most commonly used features and functions for an end user when utilizing the BluStar 8000i in BAS mode.

BluStar for Conference Room documentation consists of the following:

- ***Aastra BluStar for Conference Room Quick Start Guide*** - Contains quick installation and set-up instruction. The English, French, and German version is included in the box with the BluStar for Conference Room.
- ***Aastra BluStar for Conference Room Installation Guide*** - Contains comprehensive installation and set-up instructions, general features and functions, and an overview of the system.
- ***Aastra BluStar for Conference Room SIP Call Server User Guide*** - Describes the most commonly used features and functions for an end user when utilizing the BluStar for Conference Room in SIP Call Server mode.
- ***Aastra BluStar for Conference Room BAS-Mode User Guide*** - Describes the most commonly used features and functions for an end user when utilizing the BluStar for Conference Room in BAS mode.

Upgrading Software

Procedures for upgrading the BluStar 8000i and BluStar for Conference Room software are provided in the release notes.

Safety Summary

Please read the following safety information before attempting to install or use the BluStar 8000i or BluStar for Conference Room.

Alert!
For use with included AC/DC adaptor model no. 3A-603DB12 or GT-41132-6012-T3 / Pour utiliser avec modéle 3A-603DB12 ou GT-41132-6012-T3.

Alert!
This product is designed for indoor use only and for ambient temperatures at or below 40° C (104° F).

Warning!
The Blustar 8000i complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. The BluStar for Conference Room complies with Part 15 of the FCC rules and the requirements adopted by the ACTA. On the bottom of the equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX.
If requested, this number must be provided to the telephone company.

Warning!
This product meets the applicable Industry Canada technical specifications.

Warning!
Hazardous voltage enclosed. Voltage or current hazard sufficient to cause shock. Disconnect power before servicing.

Danger!
There are no operator serviceable parts inside the chassis. Attempting to tamper with the parts inside the chassis may result in serious injury to the user or damage to the equipment.

Danger!
This product is designed to work with a single-phase power system having a grounded neutral conductor. To reduce risk of electrical shock, do not plug into any other type of power system.

Danger!
The power cord for the devices function as the power disconnect device. Ensure that the power cord is readily accessible in case of emergency and for servicing. Disconnect power before servicing.

Danger!
Use only the power cord provided. The devices must use the grounded three-conductor power cord. Do not use two-conductor extension cords.

Obtaining Assistance

If you have read this administrator guide and still have problems, please contact Aastra Telecom Support via one of these methods:

North America

- Toll Free 1-800-574-1611
- Direct +1-469-365-3639
- Online at http://www.aastratelecom.com/support, click on Contact Technical Support

Outside North America

Please contact your regional Aastra Technical Support.

Chapter 1
System Overview

This chapter briefly describes the BluStar 8000i and BluStar for Conference Room and provides information about installing the solutions in SIP Call Server mode.

The following information is provided in this chapter:

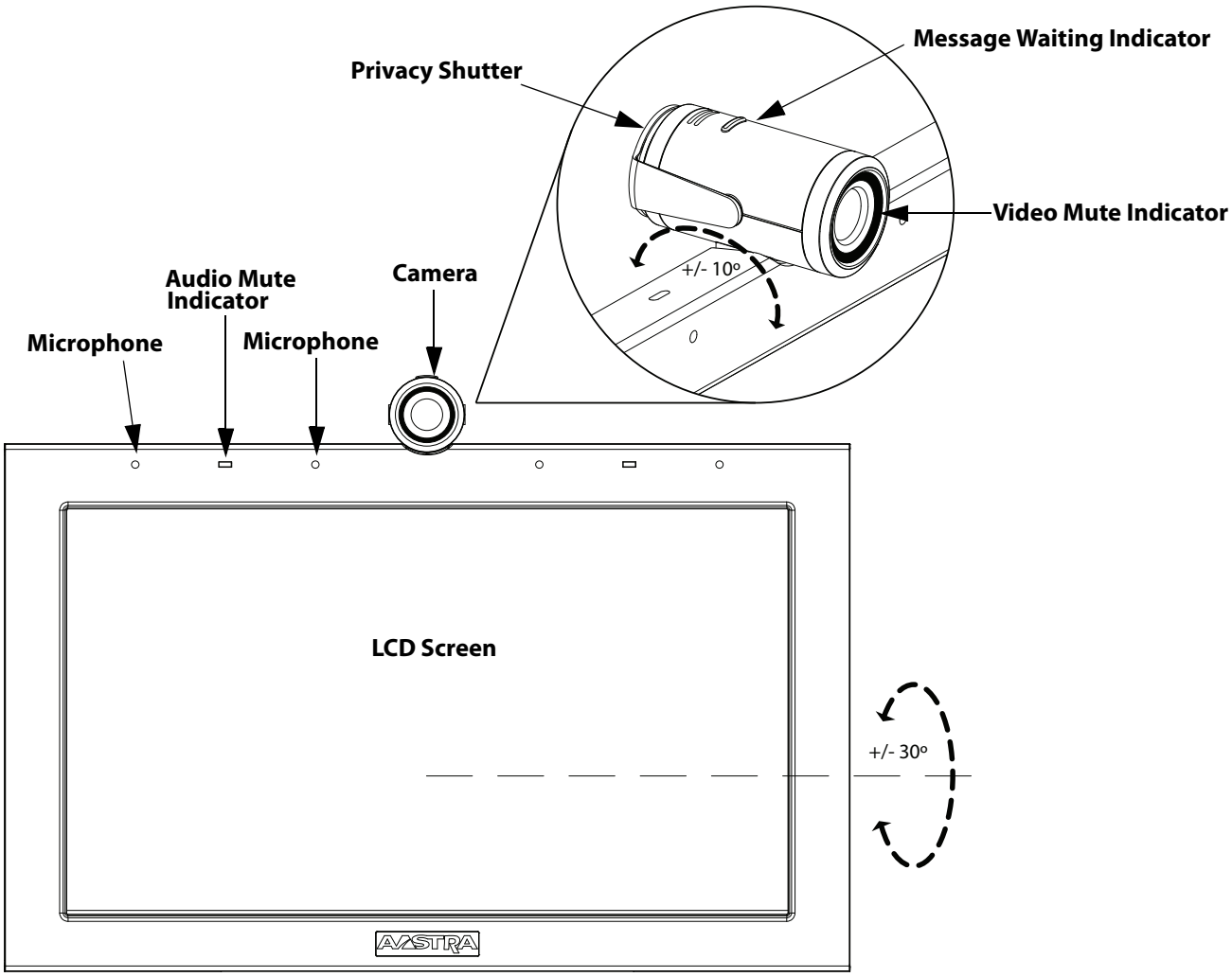
- Hardware Features
  - BluStar 8000i
  - BluStar for Conference Room
- Telephone Feature Controls
- Audio/Video Controls
- App & Telephone Connection Management Controls
- Getting Started
  - Plugging In and Starting
  - Logging In
  - Login Screens
  - Fingerprint Reader (BluStar 8000i Only)
  - Logging Off / Restarting
- Screen Basics
  - On-Screen Keyboard
  - Home Screen
  - Call Screen
  - Lock Screen
- SIP Call Server Installation Information
  - Description
  - Installation Considerations
  - Installation Requirements
  - Configuration Server Requirements

Hardware Features

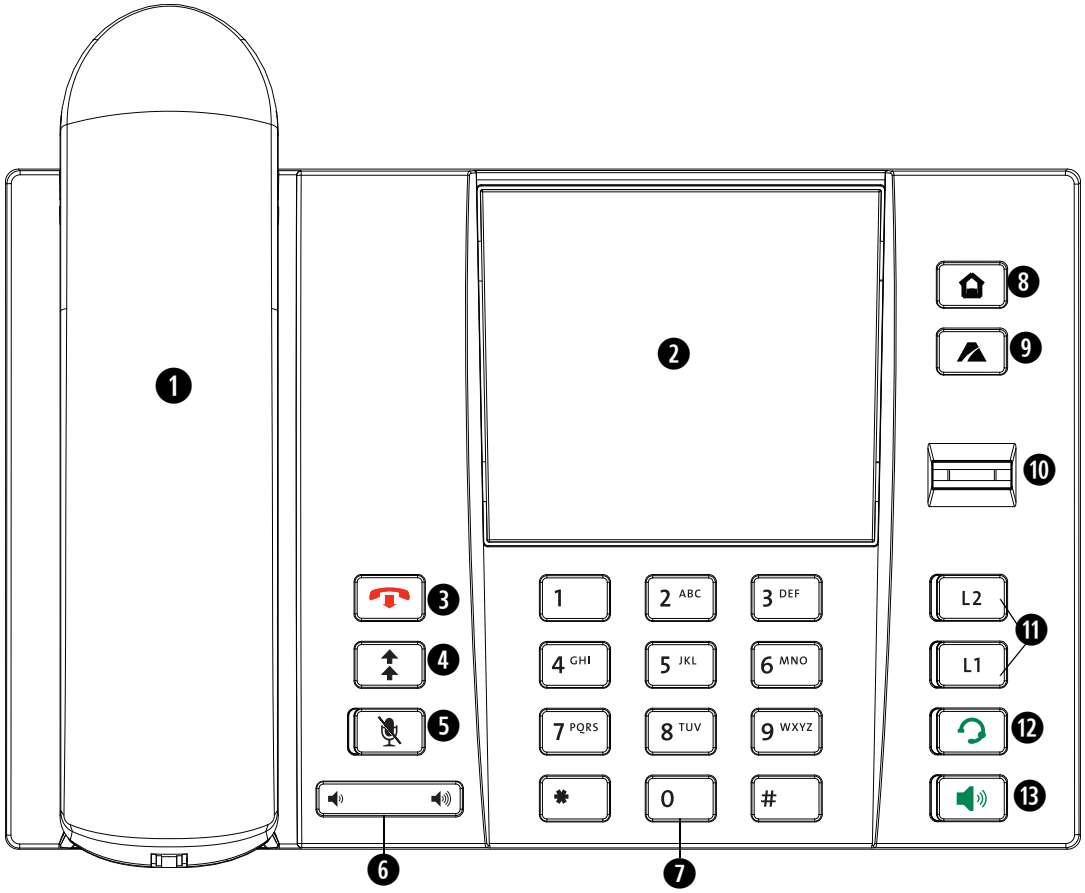
BluStar 8000i

The following two images describe all of the hardware features of the BluStar 8000i:

Screen & LCD Camera



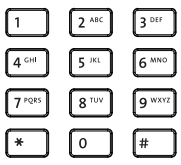
Phone Features & Keys



1	Handset	8	Home Key
2	Speaker	9	Hot Key
3	Goodbye Key	10	Fingerprint Reader
4	Redial Key	11	Line/Call Appearance Key
5	Audio Mute Key	12	Headset Key
6	Volume Key	13	Handsfree Key
7	Keypad		

Key Descriptions

The following table identifies the phone keys on the BluStar 8000i key panel that you can use for handling calls. Users have the options to select different options by pressing the phone keys or by pressing the buttons on the screen. For example, users can increase or decrease the volume level by pressing the **Volume Control** key OR by pressing the **Volume** button in the Audio/Video controls menu on the screen (see Telephone Feature Controls on page 1-6).

Key	Key Description
	Goodbye Key - Ends an active call or conference. The Goodbye key also exits an open list, such as the options list.
	Redial Key - Redials previously dialed numbers. Click on the arrow to access the last 10 dialed numbers.
	Audio Mute Key - Mutes the microphone so that other parties cannot hear you. When your BluStar 8000i is on mute, the audio mute indicator turns red, the LCD beside the audio mute key turns red, and the mute button on the screen is outlined in red.
	Home Key - Opens the home screen.
	Hot Key - Opens or closes the App menu.
	Fingerprint Reader - Users can swipe their finger over the fingerprint reader to login to the BluStar 8000i terminal.
	Line/Call Appearance Keys - Connects you to a line or call. The BluStar devices support 2 line call appearance keys.
	Headset Key - Activates handsfree for making and receiving calls using the headset.
	Handsfree Key- Activates handsfree for making and receiving calls without lifting the handset.
	Volume Control Key - Allows you to adjust the ringer volume on your BluStar 8000i. You can decrease the volume by pressing on the **(-)** sign and increasing it by pressing the **(+)** sign. Users can also change the volume by pressing the **ring volume** button in the audio video controls menu on the screen.
	**Keypad Keys** - Contains digits 0 - 9, a "*" key, and a "#" key.

BluStar for Conference Room

The following image and table details all of the input/output ports on the BluStar for Conference Room.

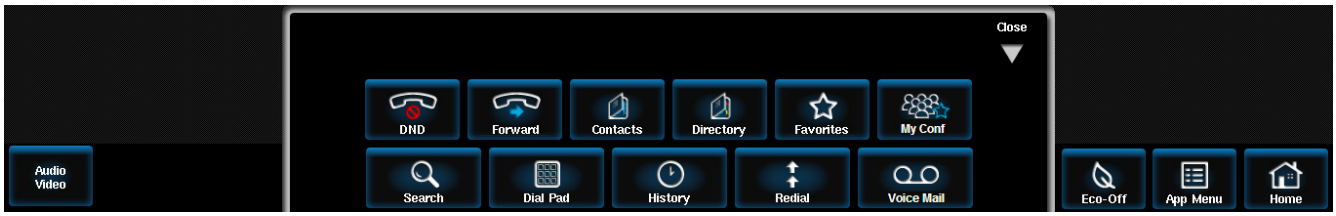
Interface Port Descriptions

Label (from Left to Right)	Port	Description
PWR	Power	Used to connect the power supply.
COM	Serial	Used to connect the HD color video camera via RS-232C Serial cable.
USB	USB (x2)	Used to connect the USB RF receiver, allowing for communication between the BluStar for Conference Room and the Wireless USB Keyboard.
LAN	Ethernet	Used to connect to the network via a Category 5/5e or Category 6 straight through cable.
VIDEO OUT	HDMI Output	Used to connect to a 720p HD display via an HDMI cable.
VIDEO IN	HDMI Input	Used to connect to the HD color video camera via HDMI to DVI cable.
VIDEO IN	Component Input	(Optional) Used to connect to an analog HD color video camera via a Component video cable.
LINE IN	Audio Input	Used to connect to the Aastra S850i Wireless Base Unit via a mono audio cable with 3.5mm male to male connectors.
LINE OUT	Audio Output	Used to connect to the Aastra S850i Wireless Base Unit via a mono audio cable with 3.5mm male to male connectors.

Telephone Feature Controls

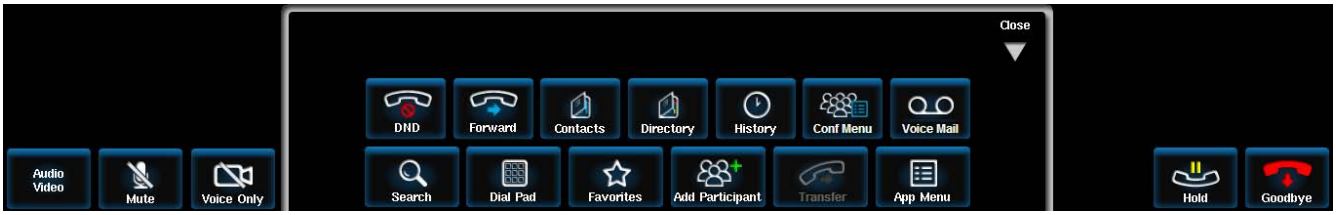
The BluStar 8000i and BluStar for Conference Room have the following telephone feature controls that appear on the Home (or Idle), Call, Conference, and Hold screens. The following images show what applications and controls are available on each screen. You will also notice that different Audio/Video Controls and App & Telephone Connection Management Controls are available on each screen.

Home/Idle Screen

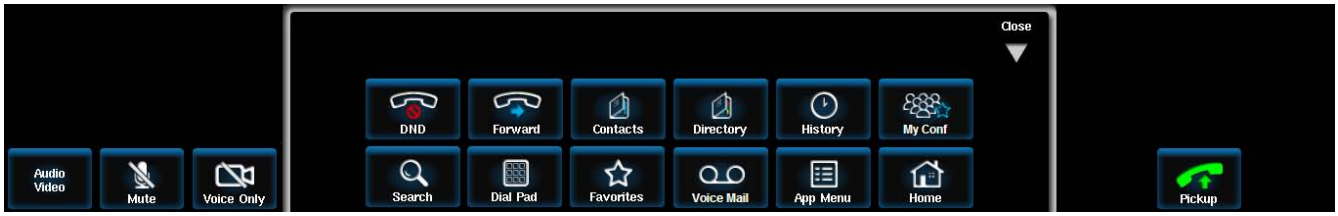


Two-Way Call Screen

Conference Call Screen



Hold Screen



The following table explains each of the telephone feature controls.

Telephone Feature Controls

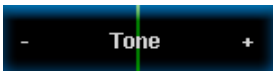
Telephone Feature	Description
	Allows you to place the device in a "Do Not Disturb" (DND) status. If DND is ON, callers calling the device do not hear a ring and then the call is dropped. If call forward is configured on the device, the call can be forwarded to voicemail or to another SIP URL or number.
	Allows you to turn ON or OFF call forwarding.
	Stores all of your contact information. On the contacts screen, you can add, edit, and delete contacts. You can also add contacts to your favorites and create contact folders.
	Allows you to find contacts from the global directory.
	Brings up the Favorites menu (the home screen) that displays your favorite contacts.
	Allows you to access your saved conferences. **Note:** Not available in SIP Call Server mode.
	Allows you to add participants to a conference call.
	Opens the conference menu, where you can request moderator control, change the format, view participants, and save the conference. **Note:** Not available in SIP Call Server mode.
	Allows you to search through your contacts, favorites, directory, and call history.
	Allows you to dial a SIP URL or phone number.
	Displays information about each call that came to your device. The BluStar 8000i and BluStar for Conference Room log the name and number of the caller, and the date and time of the call.

Telephone Feature	Description
	Allows you to redial a phone number. The redial lists stores up to 10 numbers.
 	Allows you to access your voicemail to retrieve and listen to stored messages or start the video voicemail client (if configured). When video voicemail is configured the Video Mail button will display automatically instead of the voice mail button.
	Allows you to transfer a call to another number, or to connect two active calls together and remove the calls from your screen.

Audio/Video Controls

Users can adjust the audio and video settings through the Audio/Video button

on the main screen. The BluStar 8000i and BluStar for Conference Room have the following Audio/Video controls:

Audio/Video Control	Description
	Allows you to adjust the ringer volume. You can decrease the volume by selecting the **(-)** sign and increasing it by selecting the **(+)** sign. On the BluStar 8000i, users can also change the volume by pressing the **Volume Control** key on the phone. **Note:** If you want to adjust the volume of the other party, use the volume button in the call options panel menu on the Call screen.
	Allows you to adjust the tone equalization of the audio heard from the speaker while using the speakerphone on the BluStar 8000i or S850i Wireless Conference Phone System when using the BluStar for Conference Room. You can change the tone equalization to your liking by selecting the (-) and (+) signs.
	Allows you activate the speakerphone.
	Allows you to activate the headset. **Note:** Not available when using BluStar for Conference Room.
	Opens the magic mirror.
	Turns on self view. When you are in a call or on the Magic Mirror screen, you will be able to see yourself in the bottom right-hand corner of the screen.
	Mutes the microphones on your BluStar device so that other parties cannot hear you. **Note:** If you want to mute the other party, use the Mute button in the Options menu on the Call screen.
	Turns off the camera so that only voice is available during the call. For the BluStar 8000i, if you select voice only, you will see the video mute indicator around the camera turn off indicating that the video is turned off. When you de-select it (video is on) the video mute indicator is green.

App & Telephone Connection Management Controls

Users can use the following app and telephone connection management controls while using the BluStar 8000i and BluStar for Conference Room.

App & Telephone Connection Management Controls	Description
	Opens or closes the App menu.
	Opens the Home screen.
	Directly enables Eco-Off power saving mode.
	Allows you to place an active call on hold.
	Allows you to end an active call.
	Allows you to pickup a call that is on hold.
	Allows you to join two or more calls, creating a conference call.
	Shows you how many callers you have placed on hold.
	Shows you how many lines are in use (top-left corner) and how many callers you have placed on hold (top-right corner). **Note:** Replaces the calls on hold icon when devices are configured for Shared Call Appearance (SCA).
	Allows you to swap between two calls. If Call 1 is on hold and you are speaking with Call 2, you can select the swap button beside Call 1 and it will automatically switch you to Call 1 and put Call 2 on hold.

Getting Started

This section describes the behavior and startup screens you will see when you set up and login to your BluStar 8000i or BluStar for Conference Room.

Plugging In and Starting

The following startup process will be initialized when the user plugs in their BluStar 8000i or turns on the BluStar for Conference Room.

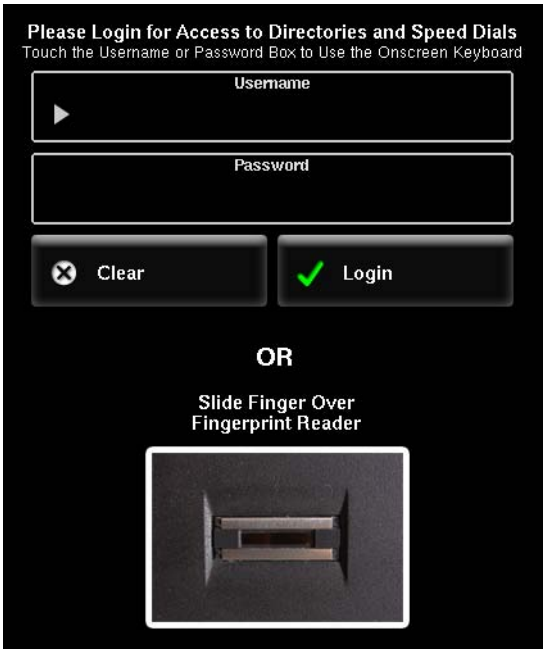
During startup, the BluStar devices check for any configuration changes or if new firmware updates are available. Once the BluStar 8000i or BluStar for Conference Room is turned on and ready to go, the login screen appears.

Note:

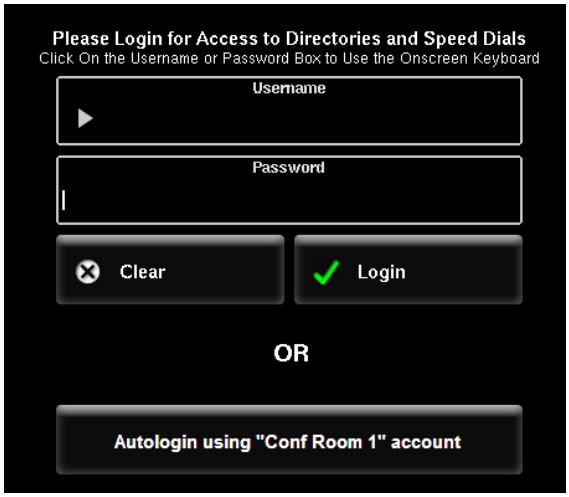
Users can access certain applications without logging in. Users must login to make calls and access their favorites and other personal settings.

Logging In

In order to make calls, access your personal settings, and use all of the applications, you must first login. For both the BluStar 8000i and BluStar for Conference Room, you can login using your **Username** and **Password.** For the Blustar for Conference Room, if the autologin feature is enabled, users can simply click the the autologin button to log in to the configured default autologin account (see Autologin Upon Restart on page 4-2 for more information).



BluStar 8000i



BluStar for Conference Room

If you are using a BluStar 8000i, you can log in using the **Fingerprint Reader**. In order to use the fingerprint reader on the BluStar 8000i, you must first login using your username and password and add your fingerprint to your account in the **Tools** menu (see Fingerprint Reader (BluStar 8000i Only) on page 1-13 for more information)**.**

To Log In Using Your Username and Password:

1. On the login window, select the **User Name** button.
2. Use the keyboard to type in your user name. (Select **Backspace** on the keyboard or the **Clear** button to delete incorrect entries).
   Note:
   If you have recently logged in, you can select the triangle in the user name box. A drop-down menu appears listing recently logged-in users. If your user name appears in the list, touch/click on it to select it.
3. Select the **Password** button and type in your password.
4. Select **Login**.

To Log In Using the Fingerprint Reader (BluStar 8000i only):

1. On the login window, slide your finger SLOWLY over the center of the fingerprint reader in a vertical/downward motion.

To Log In to a Configured Default Autologin Account (BluStar for Conference Room only):

1. On the login window, select the **Autologin using "x" account** button.

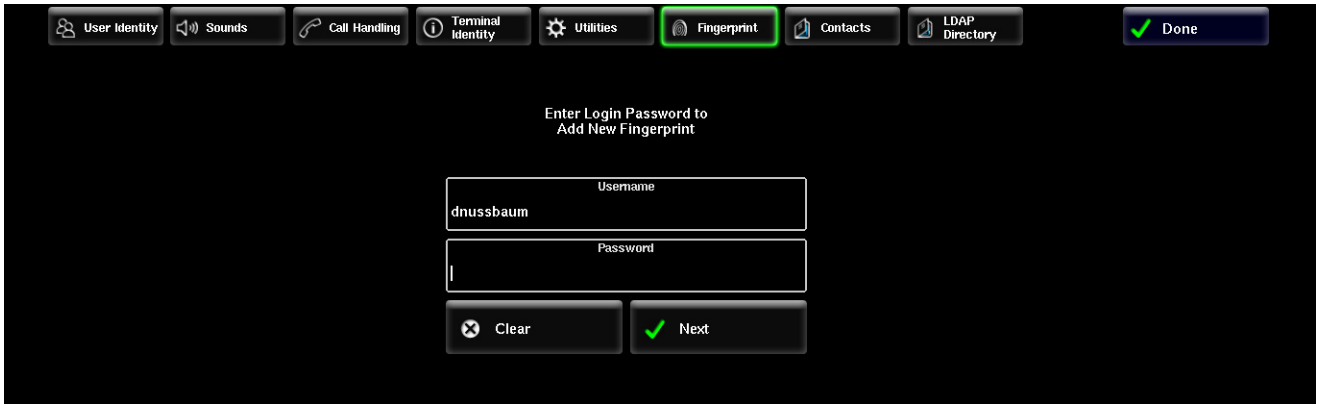
Login Screens

Once the user selects the **Login** button or uses the fingerprint reader (on the BluStar 8000i), the BluStar device will go through the following login process:

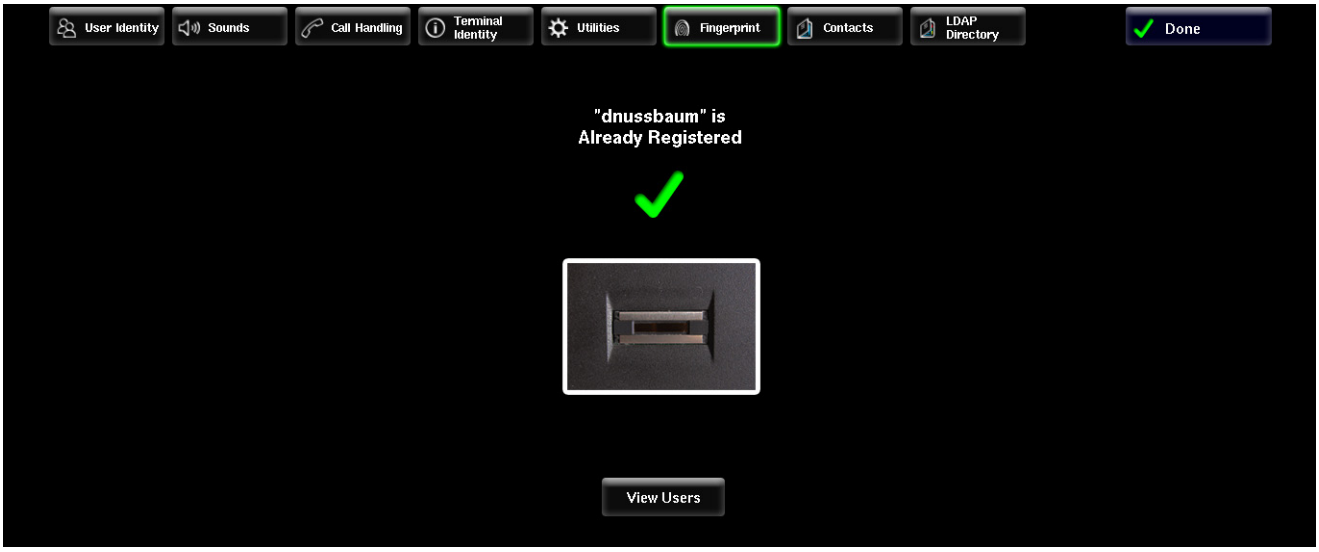
Fingerprint Reader (BluStar 8000i Only)

The biometric fingerprint reader efficiently identifies users and makes hot desking from any BluStar 8000i device an effortless task. A BluStar 8000i terminal can have up to five registered users. If someone wants to use the fingerprint reader to login to a terminal with more than five registered users, then they have to first delete a user on the fingerprint screen in order to add their fingerprint.

The first time you login to the BluStar 8000i you can assign a fingerprint to your account. On the fingerprint screen, you have to login using your username and password to add a new fingerprint.



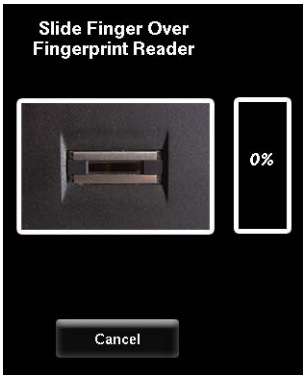
Once you have registered your fingerprint, when you open the fingerprint screen you will see that you have a fingerprint already registered to your account.



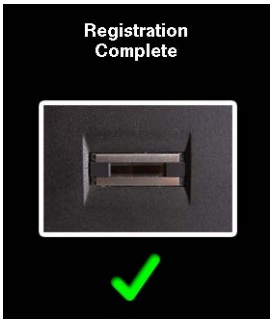
You can select the **View Users** button to see how many other users have a saved fingerprint on the terminal.

To Add a Fingerprint:

1. Enter in your login password.
2. Touch **Next**.
3. Using the fingerprint reader on the phone (not the image on the screen) swipe your finger SLOWLY in a vertical/downward motion to add a fingerprint.



4. Swipe your finger again.
   The status bar increases.
5. Swipe your finger again.
   The status bar increases.
6. Swipe your finger again.
   Registration is now complete. The status bar increases to 100%.



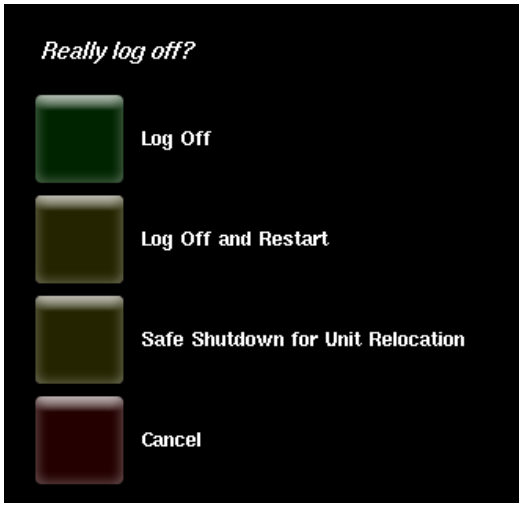
To Delete a Registered User:

1. From the fingerprint screen, touch the **View Users** button.
2. Touch the box beside a user and then the **Delete Selected** button.
   The user is removed from the screen.

Logging Off / Restarting

You can log off the BluStar 8000i and BluStar for Conference Room from the App menu. From the log off screen, you have the option to do the following:

- Log Off
- Log Off and Restart
- Safe Shutdown for Unit Relocation
- Cancel



To Log Off:

1. Select the **App Menu**.
2. Select the **Log Off** button.
3. Select either:
   - **Log Off**
   - **Log Off and Restart**
   - **Safe Shutdown for Unit Relocation**

Screen Basics

When you use your BluStar device, you will see and interact with several different applications and controls. With the BluStar 8000i you can use your fingers to tap buttons, swipe through screens, and scroll through lists. You can tap a button to select it, and tap it again to de-select it. While selected, the button will be outlined in either **green** or **red** (depending on the user interface (UI) element). With the BluStar for Conference Room, all functions can be performed using the keyboard and trackball.

On-Screen Keyboard

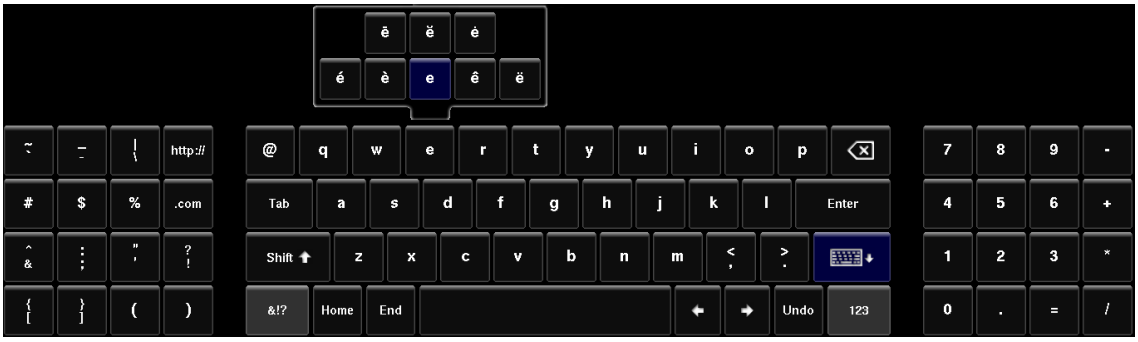
The on-screen keyboard essentially functions in the same way as a physical QWERTY keyboard. The keyboard appears automatically when a screen contains editable fields or when you touch an editable field for keyboard input.

At any time, selecting the button will hide the on-screen keyboard.

Alternate Functions

Additionally, you can access alternate functions on the on-screen keyboard by selecting and holding any of the specified keys for approximately one second. When you select and hold a key, a menu pops up allowing you to choose alternate functions.

For example, as revealed in the image below, when you select and hold the “E” key, additional special characters become available:



When you select and hold the “.com” key, additional alternate functions become available:

The table below shows the keys that support this feature and their corresponding alternate functions:

Key	Alternate Function(s)
e	é, è, ê, ë, ē, ě, ė
E	É, È, Ê, Ë, Ē, Ě
s	ß, ś, š
S	Ś, Š
a	á, à, â, ã, ä, å, æ, ā
A	À, Á, Â, Ã, Ä, Å, Æ, Ā
u	ù, ú, û, ü, ū
U	Ù, Ú, Û, Ü, Ū
o	ò, ó, ô, õ, ö, ō, œ, ø
O	Ò, Ó, Ô, Õ, Ö, Ō, Œ, Ø
n	ñ, ń
N	Ñ, Ń
c	ç, ć, č
C	Ç, Ć, Č
z	ź, ż, ž
Z	Ź, Ż, Ž
i	ì, í, î, ï, ī, ĩ, į
I	Ì, Í, Î, Ï, Ī, Ĩ, Į
y	ÿ
Y	Ÿ
l	ł
.com	.net, .org, .edu, .gov
http://	https://, tftp://, ftp://

Notes:

- For keys that represent two characters (e.g. ?/!, }/], etc...), selecting and holding the respective key for approximately one second will bring up a menu allowing you to choose the secondary character.
- All URL parameters containing special characters found within applicable configuration files must be URL-encoded. Please refer to RFC3986 for further details.

Caps Lock

Selecting and holding the Shift key for approximately one second turns the keyboard into caps lock mode. All characters are displayed as upper case characters and the Shift key is represented as a Caps Lock key indicating caps lock is on.

To turn off caps lock functionality, simply select the Caps Lock key.

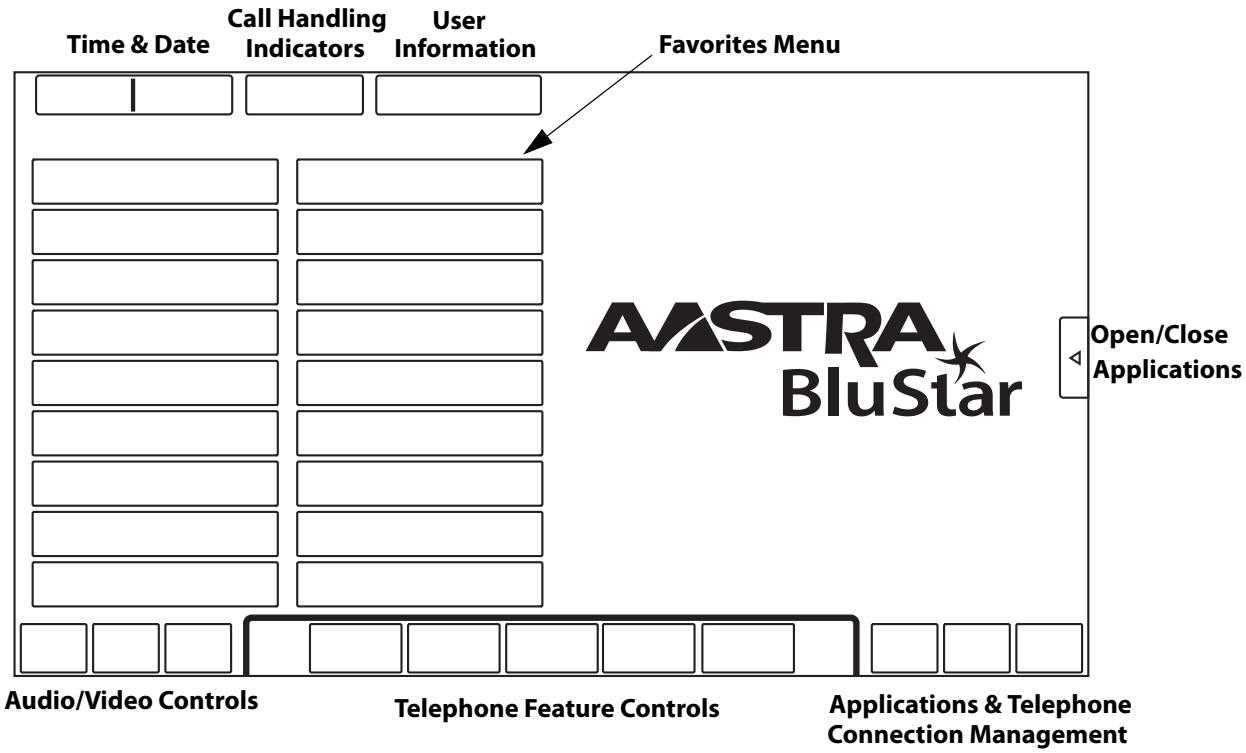
Home Screen

On the home screen you will see the following:

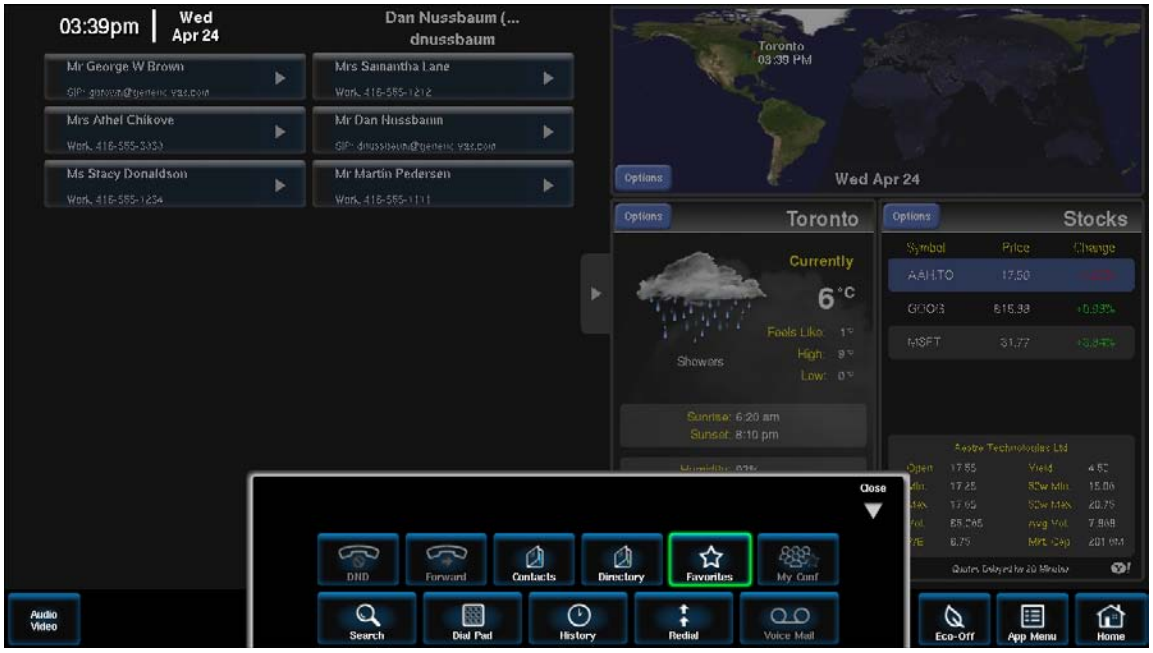
- Time
- Date
- Call handling indicators
- User information
- Favorites menu
- Open/close applications arrow
- Audio/video controls
- Telephone feature controls
- Applications and telephone connection management

Notes:

- The time, date, and user information is set up by the system administrator.
- The call handling indicators (i.e. icons for call forwarding, auto answer, and Do Not Disturb (DND) features) are only displayed when the respective feature is enabled.



The main screen is greyed out (not the video) when a new (significant) UI element takes focus. For example, you will see the home screen greyed out when you expand the telephone feature controls menu. When you close the menu, you can touch the features and applications on the home screen again.

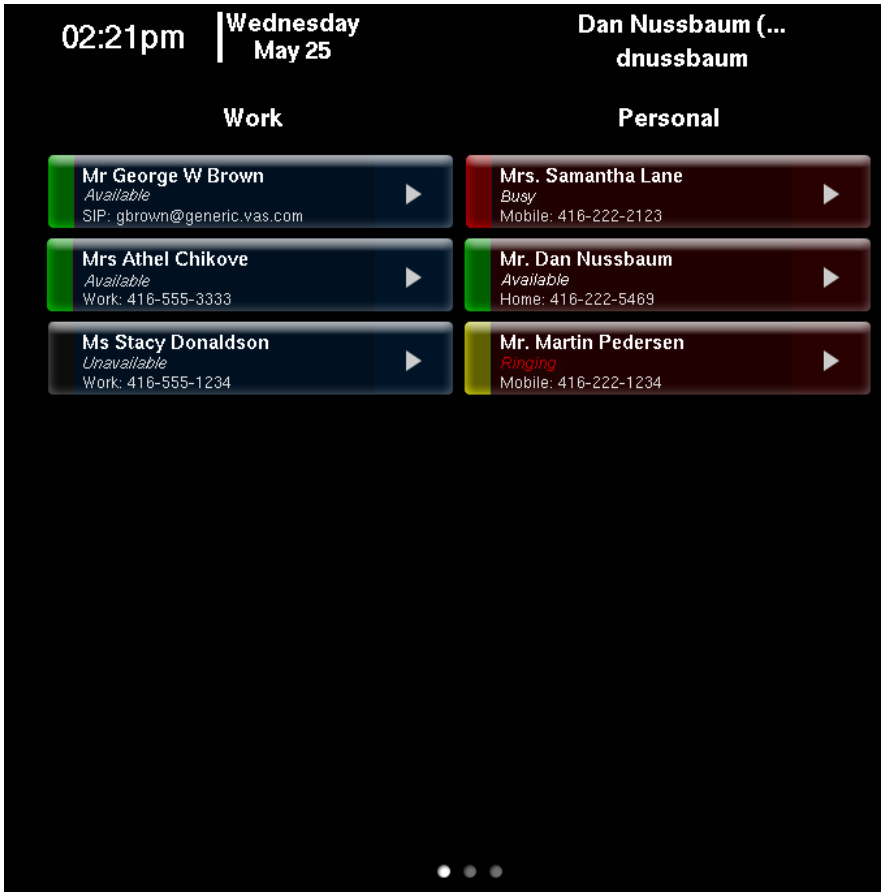


Favorites Menu

The Favorites menu appears automatically on the **Home** screen. This menu stores all of your favorite contacts. It acts like a speed dial list, so you can quickly select a contact to call. You can easily add and delete contacts to your Favorites menu. You can also monitor contacts for state changes (available [green], ringing [yellow], busy [red], and unavailable [black]) of extensions on the BluStar device (see Busy Lamp Field (BLF) on page 4-42).

Note:
Enhanced presence capabilities are available when connected to the BluStar Server. See BluStar Server Interoperability on page 4-45 for more information.

The Favorites menu is comprised of three pages each containing 18 cells (for a total of 54 cells) that can be used for either favorite entries or labels. Entries can be color-coded and easily moved to a slot on any of the three pages and unused cells can be edited for use as labels, allowing you to better organize the Favorites menu.



Note:
Pages are indicated by the dots located at the bottom of the Favorites Menu. When using the BluStar 8000i, navigating from page to page is performed by swiping the menu to the left or to the right. When using the BluStar for Conference Room, click on the left or right arrows beside the indicators to navigate through the pages.

To Open Your Favorites Menu:

1. In the telephone feature controls, select the **Favorites** or the **Home** button or, for the BluStar 8000i, press the **Home** key on the key panel.
   The button is outlined in green, indicating that your favorites are open.

To Add a Contact to Your Favorites:

1. In the telephone feature controls, select the **Contacts** button.
2. Select the arrow on a contact button to open the contact's information screen.
3. Select the **Add to Favorites** button.
4. Select **Done**.
   You will now see your contact in your Favorites menu on the home screen.
   Note:
   Newly created favorites are placed in the first available slot on the first available page and are highlighted in green.

To Remove a Contact from Your Favorites:

1. In your Favorites menu, select the arrow on a contact button to open up the contact's information screen.
2. Select **View Full Contact Information**.
3. Select the **Delete Favorite** button.
   The contact has been removed from your favorites.

To Apply Color-Coding to a Contact in Your Favorites:

1. In your Favorites menu, select the arrow on a contact button to open up the contact's information screen.
2. Select **View Full Contact Information**.
3. Select a color from the list of available colors under the **Favorite** heading.
4. Select **Done**.
   You will now see the entry in your Favorites menu with he selected color-coding option applied.

To Move Contact Entries Within the Favorites Menu:

1. In your Favorites menu, select and hold the contact entry you wish to move.
   The entry will be highlighted in green.
2. Drag and drop the selected contact entry into the desired slot.
   You will now see the entry in the desired slot.
   Note:
   Entries can be placed in a slot on any of the three pages. To move the contact entry to a different page, drag the selected entry to the extreme right or extreme left and drop the entry into the desired slot.

To Create Labels from Unused Cells:

1. In your Favorites menu, select and hold an unused cell (i.e. an empty cell containing no entries).
   A cursor will appear allowing you to edit the cell to use as a label.
2. Edit the label by using the keyboard.
3. Select **Enter.**
   You will now see your label in your Favorites menu on the home screen. The label can now be moved within the Favorites menu in the same fashion as a contact entry.

To Update or Delete a Label:

1. In your Favorites menu, select the cell containing the label you wish to update or delete.
   A cursor will appear allowing you to edit the cell to use as a label.
2. Edit the label by using the keyboard or delete the label using the **Backspace** button/key.
3. Select **Enter.**
   The cell will now reflect the changes you have made.

To Go to the Home Screen:

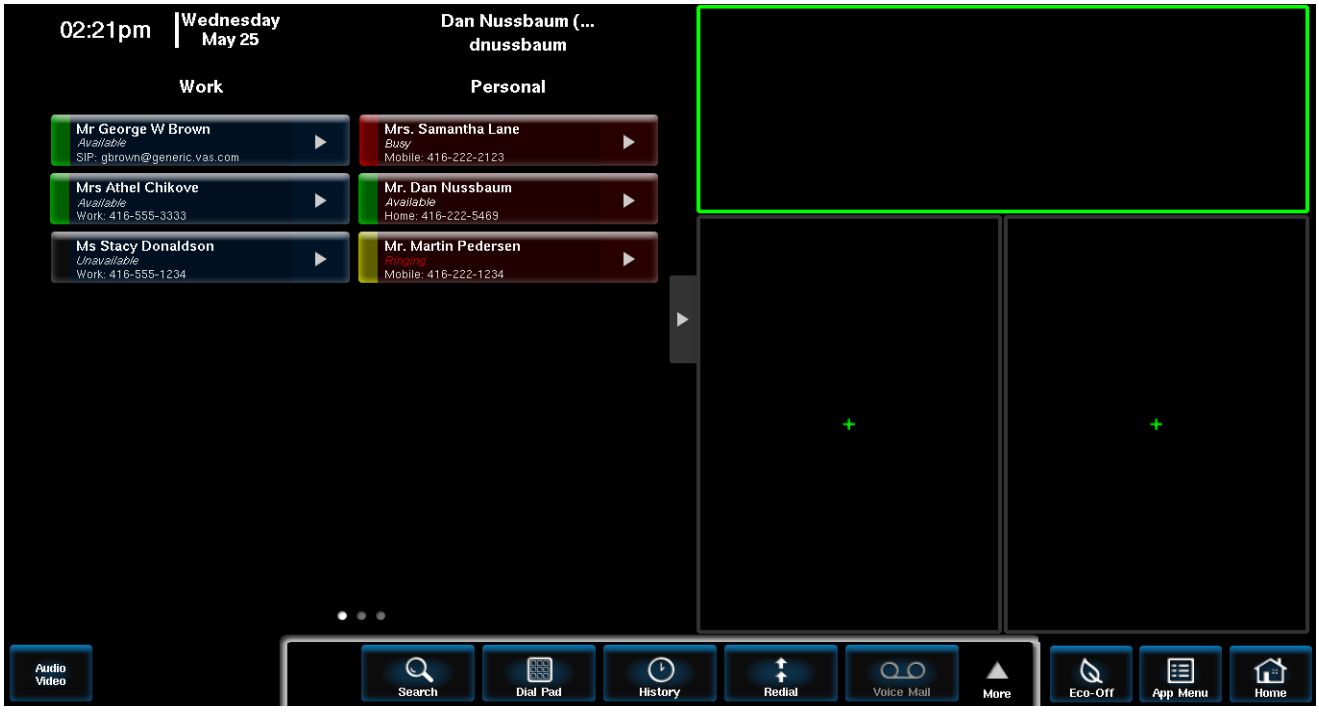
1. Select the **Home** or the **Favorites** button
   OR
   the **Home** key (on the BluStar 8000i).

Adding Apps to the Home Screen

You can customize the applications (apps) that appear on your home screen. The BluStar 8000i and BluStar for Conference Room have several apps that you can open and/or add to your home screen, and you can display up to three apps at one time. From the App menu, users can easily add or replace apps to one of the three frames on the home screen.

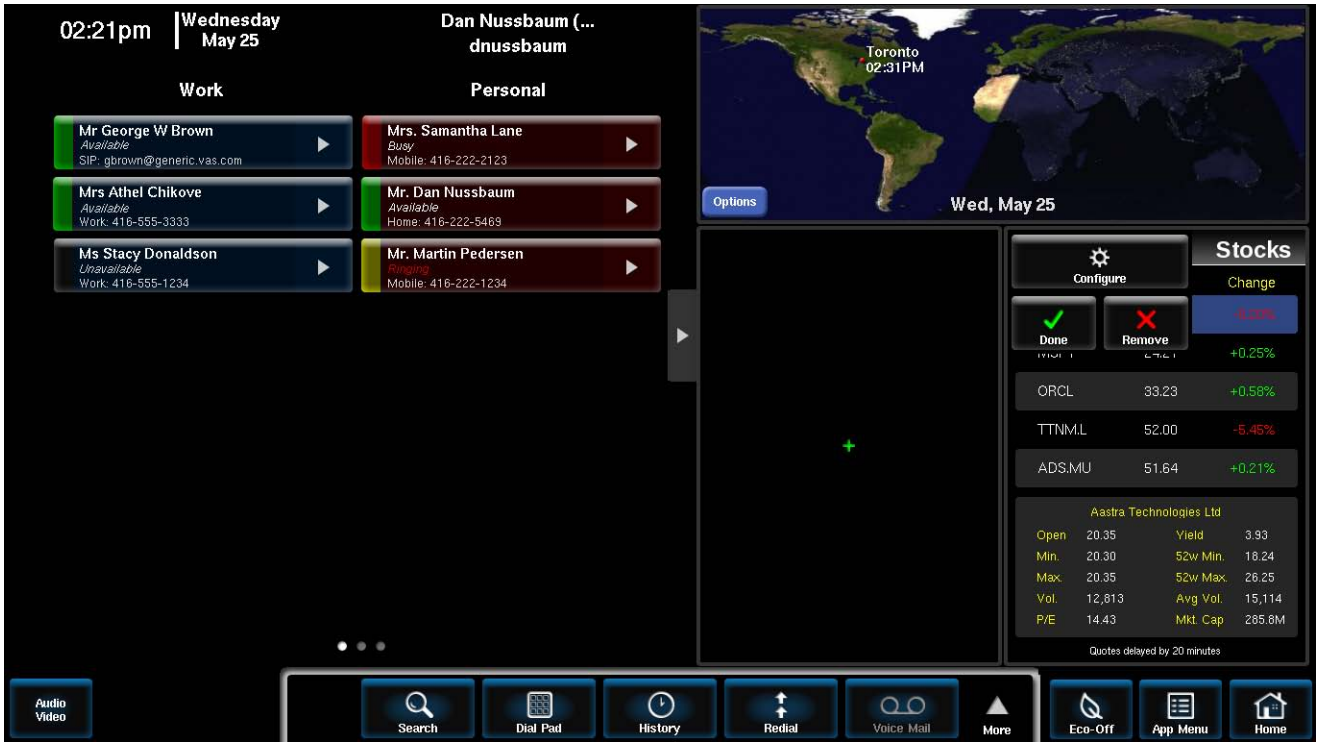
To Add Applications to the Home Screen:

1. Select the **App menu** button.
2. Select the app you want to add to the home screen.
3. Select inside a frame (with or without an app) outlined in green to place the app.
   Note:
   Only frames that can display a particular app will be outlined in green. For example, the clock app is only designed for the top frame on the home screen, so you wont be able to place it in one of the smaller frames.



To Remove Applications from the Home Screen:

1. Select the blue **Options** button on the top right hand corner of an app.
2. Select the **(-) Remove** button.
   You will now see an empty box on the home screen.



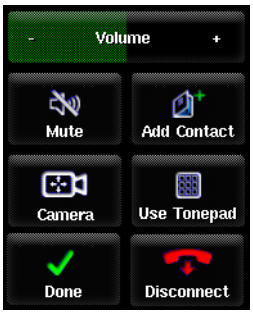
To Minimize or Maximize the Opened Applications:

1. Select the open and close application arrow.

Call Screen

The call screen appears when you are participating in a call. In addition to showing the image(s) and name(s) or number(s) of the people you are talking to, the **Call Appearance Bar** provides the call status for the current call, and includes the party's name and elapsed call time.

Additionally, touching the **Options** button on a caller's screen will open the **Call Options Menu** where you can:

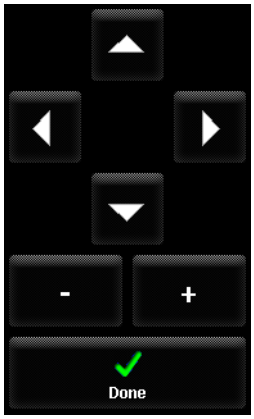


- Adjust or mute the volume of the party
- Add the party to your address book
- Remotely assume control of the remote party's HD camera (only if the remote party is a BluStar for Conference Room user and the call is a video call)
- Bring up a tonepad to dial another party
- Disconnect the party

Remotely Controlling the HD Camera When in an Active Call with a BluStar for Conference Room User

Note:
During a conference call, remote camera control functionality is restricted to the BluStar for Conference Room HD camera owner and the conference host (i.e. the conference call initiator).

1. When in an active call with a BluStar for Conference Room user, select the **Options** button on the video call screen
2. Select the **Camera** button.
   Note:
   If the Camera button is unavailable, the feature may not be enabled on the remote side. Ask the remote BluStar for Conference Room user to enable the remote control feature
3. Select the arrow keys to move the remote HD camera connected the BluStar for Conference Room in the respective direction. Select the **+** button to zoom in and the **-** button to zoom out.

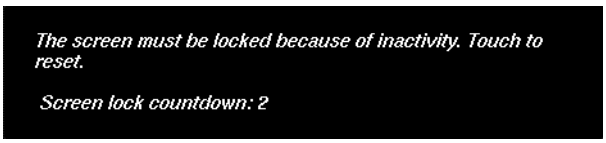


4. When you have the camera positioned as per your preference select **Done**.

Lock Screen

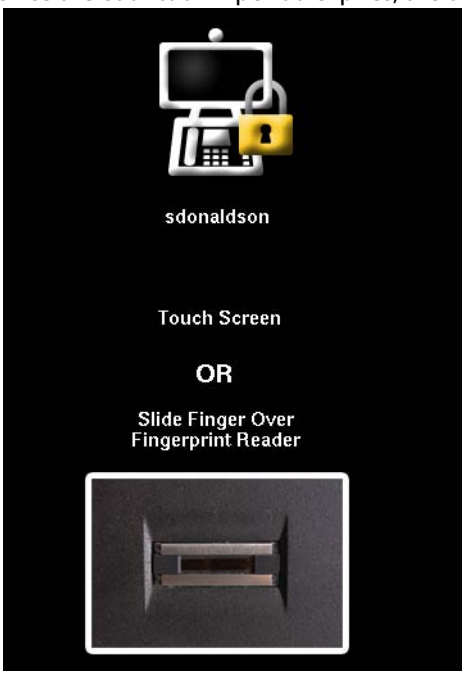
For reasons of security, the BluStar device's screen can be locked by selecting the **Lock Screen** button in the App menu, or from a period of system inactivity (configured by the system administrator).

When the preset period of system inactivity is reached, a pop-up window appears informing users that the screen is about to be locked. The window also shows a countdown timer indicating how much time remains before the screen lock is enabled.



Note:
Touching or clicking the pop-up window aborts the impending screen lock function.

Once the countdown period expires, the device locks and displays the following screen:



BluStar 8000i

BluStar for Conference Room

To Lock the Screen:

1. Select the **App menu** button.
2. Select the **Lock Screen** button.

To Unlock the Screen:

1. Select anywhere on the screen to enter in your password OR (if using a BluStar 8000i) slide your finger over the fingerprint reader in a vertical/downward motion to unlock your terminal.
2. Select the password box.
3. Type in your password. If you make a mistake while entering the password, select **Clear**.
   Note:
   For security reasons, another user cannot be selected via the username field. The BluStar devices require that the password of the user who was most recently logged in to the device be entered to unlock the device.
4. Select **Unlock**.
   The device unlocks and automatically returns to the screen that displayed before the device was locked.

SIP Call Server Installation Information

Description

The setup and installation of the BluStar 8000i and BluStar for Conference Room in SIP Call Server mode can be done using the configuration files or through the device's UI via the **Tools** menu (see Terminal Identity on page 4-5).

When the BluStar device is initialized for the first time, Dynamic Host Configuration Protocol (DHCP) is enabled by default. Depending on the type of configuration server setup you have, the device may download a firmware version automatically, or you may need to download it manually.

Installation Considerations

The following considerations must be made before connecting the BluStar 8000i or BluStar for Conference Room to the network:

- If you are planning on using dynamic IP addresses, make sure a DHCP server is enabled and running on your network.
- If you are not planning on using dynamic IP addresses, see Configuring Network Settings Manually on page 3-7 for manually setting up an IP address.
- If you are planning to provide a configuration server by DHCP, see DHCP on page 3-3 for how to configure the DHCP server.
- On the **Terminal Identity > Advanced** screen in the **Tools** menu, the **SIP Call Server** button must be selected and you must enter in the configuration server URL (see Terminal Identity on page 4-5 for more information). Administrators can do this through the configuration files, manually on the device's UI, or through DHCP options.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Configuration Server Settings on page A-12.

To install the BluStar 8000i terminal, refer to the ***Aastra BluStar 8000i Desktop Media Phone Quick Start Guide*** or the ***Aastra BluStar 8000i Desktop Media Phone SIP Call Server User Guide*** for more information.

To install the BluStar for Conference Room system, refer to the ***Aastra BluStar for Conference Room Quick Start Guide,*** or the ***Aastra BluStar for Conference Room Installation Guide*** for more information.

Installation Requirements

The following are general requirements for setting up and using your BluStar 8000i or BluStar for Conference Room:

- SIP-based IP PBX system or network installed and running with a SIP account created for the BluStar device
- Ethernet/Fast Ethernet LAN (10/100 Mbps) or Gigabit Ethernet LAN (1000 Mbps)
- Category 5/5e straight through cabling
- Power source

  Alert!
  For use with included AC/DC adaptor model no. 3A-603DB12 or GT-41132-6012-T3

Configuration Server Requirements

A basic requirement for setting up the BluStar 8000i and BluStar for Conference Room is to have an FTP, TFTP, HTTP, or HTTPS configuration file server (HTTP recommended). On the server you need to have the following files:

- aastra.cfg
- <model>.cfg (i.e. 8000i.cfg or 8000icr.cfg)
- <mac>.cfg

In one of the above files (e.g. the <mac>.cfg file), you must have the BluStar device user configuration URL that specifies where to look for the <user>.cfg file.

Note:

Filenames for the <model>.cfg are case sensitive.

See Installing the Configuration Files on page 2-3 for more information.

If HTTP/HTTPS is used to push the <user>.cfg file to the server, then the following two files need to be in a folder specified by the BluStar device user configuration URL:

- upload.html
- upload_file.php

Notes:

- To obtain these two files, contact Aastra Telecom Support.
- Hot desking will not work when using the HTTP/HTTPS configuration protocol without these two files properly installed on the HTTP configuration server.
- PHP has to be installed on the server and the folder has to allow writing.

Reference

To set the protocol for your configuration server, see Configuring the Configuration Server Protocol on page 2-13.

Chapter 2
Configuration Server & Files

The BluStar 8000i and BluStar for Conference Room have specific advanced operational features that you can configure. This chapter describes each feature and provides procedures for configuring the BluStar device to use these features.

This section includes the following information:

- Configuration Files
  - Update URL
  - Configuration Precedence
  - Installing the Configuration Files
  - Using the Configuration Files
  - Encryption
- Configuration Server
  - Configuration Server Protocol
  - Configuration Server Settings
  - Configuring the Configuration Server Protocol
  - Configuration Server Redundancy via DNS A Records
  - Using the Auto-Resync Feature

Configuration Files

A system administrator can enter specific parameters into the configuration files to configure the BluStar device. By default on startup, the BluStar 8000i and BluStar for Conference Room download its configuration files from the configuration server you have set. If the username and password from the login screen is correct, the device will download its configuration files from the server. The BluStar devices support TFTP, FTP, HTTP, and HTTPS configuration servers.

Note:
For more information on changing the download protocol, see Configuring the Configuration Server Protocol on page 2-13.

The configuration files consist of the following files:

- **aastra.cfg** - Contains configuration information that applies to all BluStar and/or all 9000i and 6700i series IP SIP phone devices.
- **<model>.cfg** - Contains model specific information. Currently the following two <model>.cfg files can be used (the filenames are case sensitive):
  - 8000i.cfg - BluStar 8000i Desktop Media Phone
  - 8000icr.cfg - BluStar for Conference Room
- **<mac>.cfg** (e.g. 00085D112233.cfg) - Contains configuration information specific to a BluStar device (the filenames are case insensitive).
- **<user>.cfg** (e.g. jdoe.cfg) - Contains read-only server-related user configuration information that is not configurable through the BluStar device (i.e. sip authentication information, proxy settings, registrar parameters, etc.). The <user>.cfg file can be edited by administrators (even when the user is logged in; however, the changes will not take effect until the next login).

- **<user>_local.cfg** (e.g. jdoe_local.cfg) - Contains hot-desking-related user configuration information that is configurable through the BluStar device (i.e. favorites, call logs, call handling settings, etc.). The <user>_local.cfg file is updated when the local settings on the user's device are changed and saved when the user logs off.

Note:

The <user>_local.cfg file must never be edited manually. All user parameters that need to be configured should be defined and edited in the <user>.cfg file only.

Filenames for the <model>.cfg are case sensitive whereas filenames for the <mac>.cfg are case insensitive.

In the App menu on the device's UI, users and administrators can view configuration information through the **Status** app. Users can click on either **Terminal Configuration** to view configuration information in the aastra.cfg, <model>.cfg, and <mac>.cfg files, or **User Configuration** to view the configuration information in the <user>.cfg file.

Update URL

In order for the BluStar device to download the software, there has to be the "**update url**" parameter in either the <mac>.cfg, <model>.cfg, or aastra.cfg file. It is recommended to have this parameter in the <mac>.cfg file.

For example:

update url: ftp://10.55.102.56/aastracfg

Note:

All updated system software files provided by Aastra should be placed in the path specified in the "**update url**" parameter.

Reference:

For more information of each configuration file parameter, see Appendix A "Parameters" on page A-1.

For a sample of the configuration files, see Appendix B "Sample Configuration Files" on page B-1.

Configuration Precedence

The BluStar 8000i and BluStar for Conference Room can accept the following sources of configuration data:

- The configuration server most recently downloaded/cached from the configuration server files: **aastra.cfg/<model>.cfg/<mac>.cfg** (or the aastra.tuz/<model>.tuz/<mac>.tuz encrypted equivalents).
- The BluStar device user configuration URL("**user config url**" parameter) that specifies where to look for the **<user>.cfg** (or <user>.tuz encrypted equivalent) file.

Configuration precedence rules are as follows:

- Settings in the <model>.cfg file take precedence over the settings in the aastra.cfg files only.
- Settings in the <mac>.cfg file take precedence over the settings in the <model>.cfg and aastra.cfg files.
- Settings in the <user>.cfg file take precedence over the settings in the <mac>.cfg, <model>.cfg, and aastra.cfg files.
- Settings in the <user>_local.cfg file take precedence over the settings in the <user>.cfg, <mac>.cfg, <model>.cfg, and aastra.cfg files.
- Settings that are locally configured directly through the device's UI take precedence over the settings in all of the configuration files.

Notes:

- BluStar device settings include intelligent default values (therefore an empty configuration file is always the best). Administrators should only set a parameter if they MUST control or override that particular setting.
- The internal default values can be dynamically adjusted based on network, call, and other conditions and settings.
- If a device setting value is specified in the configuration file, then this dynamic behavior is disabled for that setting.

Installing the Configuration Files

The following procedure describes how to install the configuration files.

1. If DHCP is disabled, manually enter the configuration server's IP address. For details on manually setting DHCP, see Configuring Network Settings Manually on page 3-7.
2. On the configuration server, you must have the **aastra.cfg, <model>.cfg**, and **<mac>.cfg** files.
   Notes:
   • The <*mac*> attribute represents the actual MAC address of your BluStar device (i.e., *00085D112233.cfg*).
   • The device's <*mac*> address can be obtained under the **About** app menu.
   • Filenames for the <model>.cfg are case sensitive whereas filenames for the <mac>.cfg are case insensitive.
3. Place the mandatory "**user config url**" parameter that specifies where to look for the **<user>.cfg** file in either the **aastra.cfg, <model>.cfg,** or the **<mac>.cfg** file.
   Note:
   The "**user config URL**" parameter supports TFTP, FTP, HTTP, HTTPS, however only FTP, HTTP and HTTPS can be authenticated.
4. Place the "**update url**" parameter in the **<mac>.cfg** file.

   When the BluStar device is booting up, only the **aastra.cfg, <model>.cfg**, and **<mac>.cfg** are loaded.
   The **<user>.cfg** and **<user>_local.cfg** are loaded when the user logs in.
   Note:
   To login, the device has to be able to load the <user>.cfg file.
5. Restart the BluStar device as described in Logging Off / Restarting on page 1-15.

Using the Configuration Files

You must use a text-based editing application to open the configuration files (aastra.cfg, <mac>.cfg, or <user>.cfg) to configure the BluStar 8000i and BluStar for Conference Room.

Note:
The <user>_local.cfg file must never be edited manually. All user parameters that need to be configured should be defined and edited in the <user>.cfg file only.

Use the following procedure to add, delete, or change parameters and their settings in the configuration files.

Note:
Apply this procedure wherever this guide refers to configuring parameters using the configuration files.

Configuration Files

1. Using a text-based editing application, open the configuration file that you want to configure the parameter in (either aastra.cfg, <model>.cfg, <mac>.cfg, or <user>.cfg).
2. Enter the required configuration parameters followed by the applicable value.
   For example, in the <user>.cfg:
   sip user name: 1010
3. Save the changes and close the configuration file.
4. If the parameter requires the BluStar device to be restarted in order for it to take affect, use the **Log Off** app on the device's UI.

Encryption

An encryption feature for the BluStar 8000i and BluStar for Conference Room allows service providers the capability of storing encrypted files on their server(s) to protect against unauthorized access and tampering of sensitive information (e.g. user accounts, login passwords, registration information).

Configuration File Encryption Method

Only an administrator can encrypt the configuration files for a BluStar device. Administrators use a password distribution scheme to manually pre-configure or automatically configure the devices to use the encrypted configuration with a unique key.

From a Microsoft Windows command line, the administrator uses an Aastra-supplied encryption tool called "anacrypt.exe" to encrypt the configuration files.

Note:
Aastra also supplies encryption tools to support Linux platforms (i.e. anacrypt.linux) if required.

This tool processes the plain-text system configuration files (<mac>.cfg, <model>.cfg, and aastra.cfg) as well as the user configuration files (i.e. <user>.cfg and <user>_local.cfg) and creates triple-DES encrypted versions called <mac>.tuz, <model>.tuz, aastra.tuz, <user>.tuz, and <user>_local.tuz. Encryption is performed using a secret password that is chosen by the administrator.

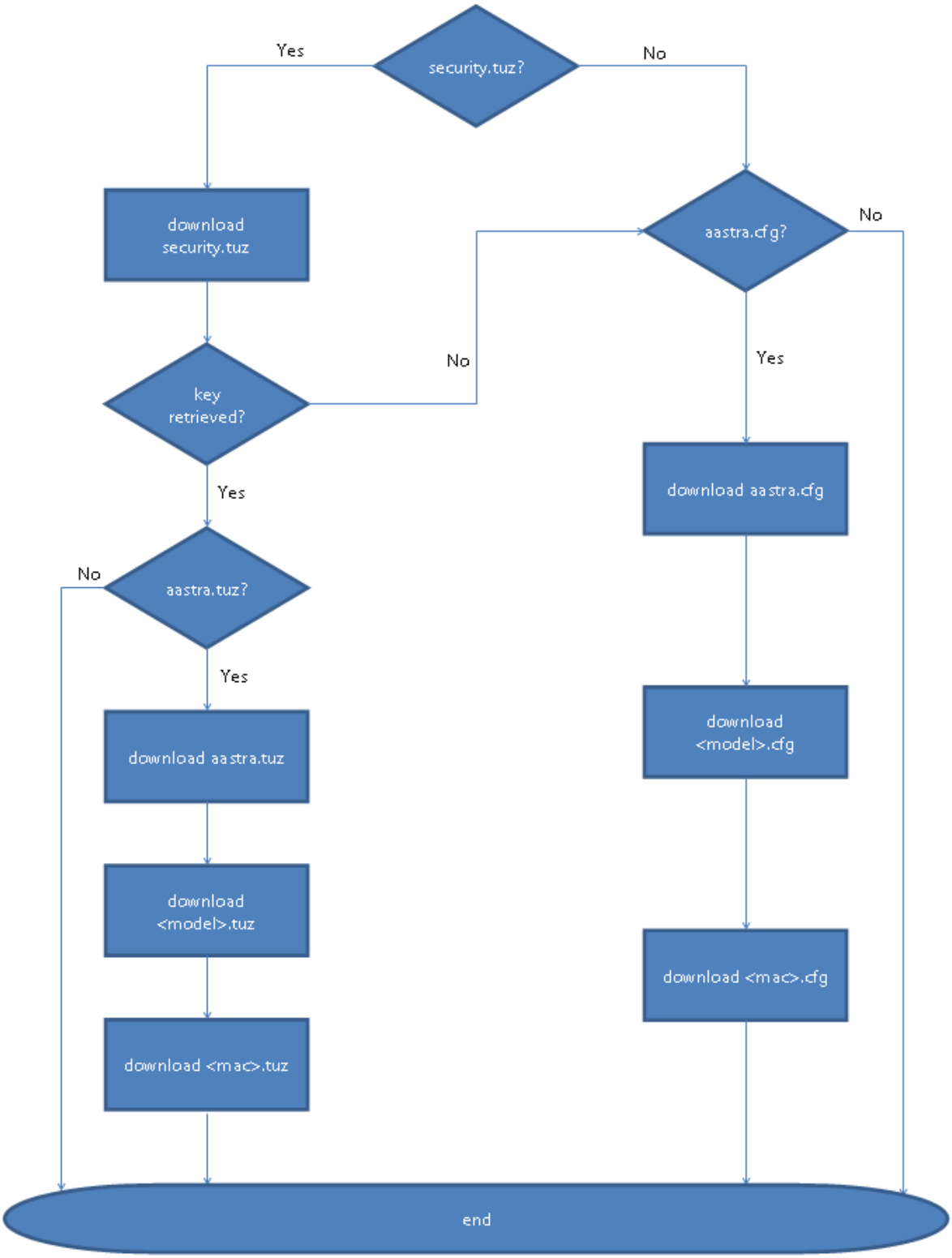
Note:
If the system configuration files are located on a different server/directory than the user configuration files, encrypting one set of configuration files does not automatically encrypt other set of configuration files as well.

The encryption tool is also used to create additional encrypted tag files called security.tuz, which control the decryption process on the BluStar devices. The devices looks for two encryption (i.e. security.tuz) files: one for the system configuration files (during the boot up sequence) and one for the user configuration files (during the login/logout and check-sync processes).

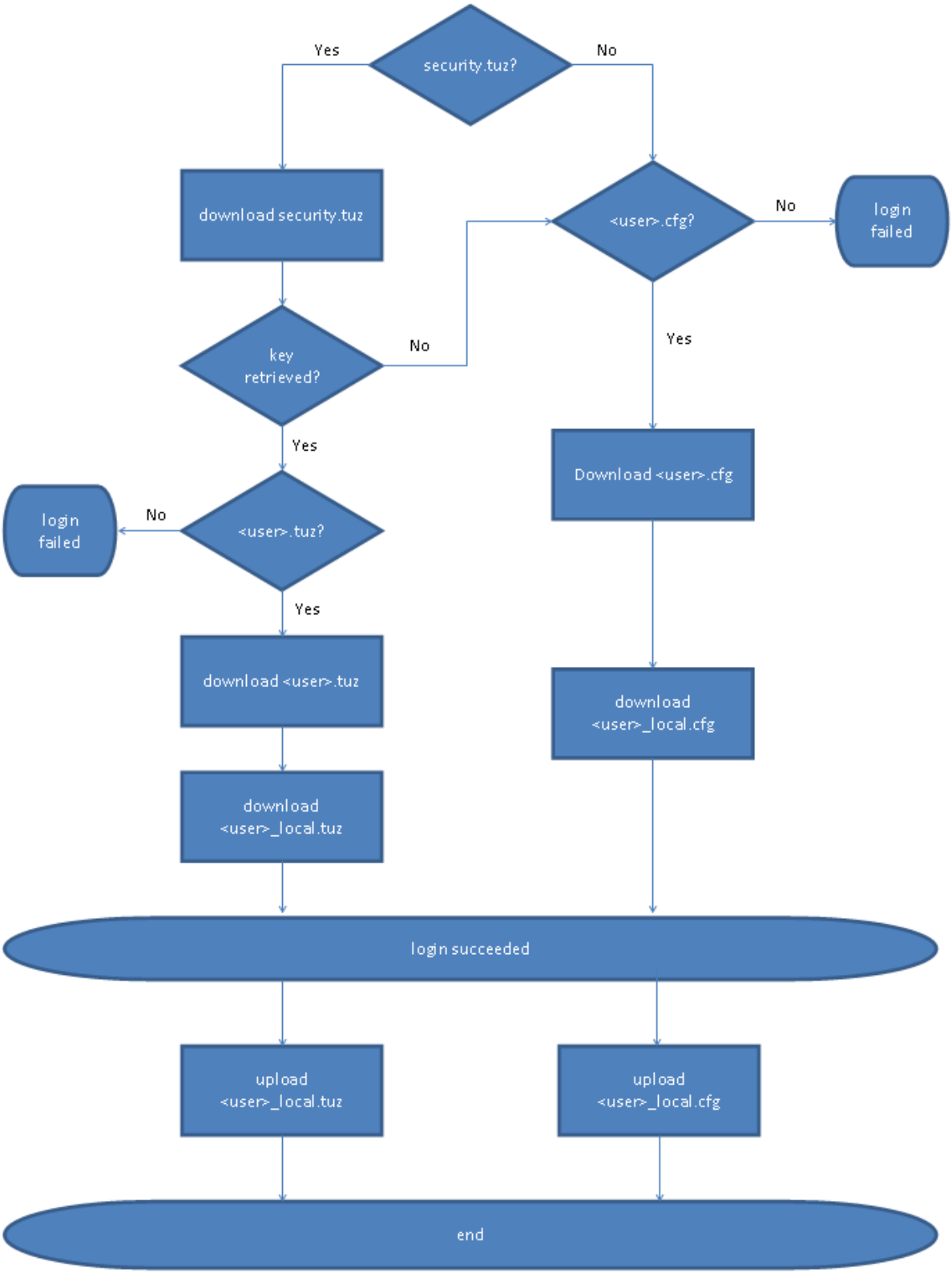
One security.tuz file can be created for use with all configuration files if the system and user configuration files are on the same server/directory. If the system and user configuration files are on separate servers/directories, the same security.tuz file can be shared, but both servers/directories must contain a copy of the same file.

The following flowcharts detail the system configuration download and user configuration download/upload process:

System Configuration Download Process During Boot Sequence



User Configuration Download/Upload During Login/Logout Process



If security.tuz is present on the configuration server during the boot up sequence, the BluStar device downloads it and uses it locally to decrypt the configuration information from the aastra.tuz, <model>.tuz, and <mac>.tuz files. If no security.tuz is present on this configuration server, the BluStar device will download the plain-text aastra.cfg, <model>.cfg, and <mac>.cfg files.

If the user configuration files are located on the same server/directory as the system configuration files and the security.tuz (used at boot up for the system configuration files) is present, the same security.tuz will be used to download and decrypt the <user>.tuz and <user>_local.tuz files at a user login or check-sync and encrypt then upload the <user>_local.tuz file at logout. If no security.tuz is present, the device will download the plain-text <user>.cfg and <user>_local.cfg files and upload the <user>_local.cfg file at logout.

If the user configuration files are located on a separate user configuration server/directory and a security.tuz file is present, during a user login or check-sync the BluStar device downloads it and uses it locally to decrypt the configuration information from the <user>.tuz and <user>_local.tuz files; this same security.tuz is used to encrypt and upload the <user>_local.tuz file at logout. If no security.tuz is present on this seperate user configuration server/directory, the device will download the plain-text <user>.cfg and <user>_local.cfg files and upload the <user>_local.cfg file at logout.

Notes:

- If the use of encrypted configuration files is enabled (via security.tuz) the .cfg files are ignored and only the encrypted equivalent .tuz files are read.
- Because only the encrypted versions of the configuration files need to be stored on the server(s), no plain-text configuration or passwords are sent across the network, thereby ensuring security of the configuration data.
- To make changes to the configuration files, the administrator must save the original files.

Three versions of encryption are available (i.e. v1, v2, and v3) for the BluStar 8000i and BluStar for Conference Room configuration files each utilizing different encryption routines.

Note:

Configuration files that are encrypted using v3 encryption can only be decoded by BluStar devices on Release 4.1.1 and above. Devices with v3-encrypted configuration files will lose the ability to decode the files (and in turn will lose all previously configured settings) if they are downgraded to any firmware release below 4.1.1.

Additionally MAC-specific encryption is also available as an option. MAC-specific encryption prevents unauthorized parties from reading or writing the contents of the <mac>.tuz file. It also provides the following:

- Prevents users from using the <mac>.tuz file that does not match the user's device MAC address.
- Renders the <mac>.tuz file invalid if the user renames the file.

Encrypting Configuration Files

Use the following procedure to encrypt the configuration files:

1. Obtain the anacrypt encryption tool (anacrypt.exe) from your Aastra representative.
2. Open a command line window application (i.e., DOS window).
3. At the prompt, enter ***anacrypt.exe*** and press <Return>.
4. Enter a command utilizing the details provided in the help screen.

```
C:\> anacrypt.exe -h
Provides encryption of the configuration files used for the
family of Aastra IP phones.

Copyright (c) 2005-2012, Aastra Technologies, Ltd.

Usage:
anacrypt {infile.cfg|-d <dir>} [-p password] [-m] [-i] [-v] [-h]
```

Anacrypt Switch	Description
{infile.cfg | -d <dir>}	Specifies that all .cfg files in <dir> should be encrypted.
[-p password]	Specify password used to generate keys.
-m	Generate MAC.tuz files that are device specific.
-v1	Specifies the version of encryption that the anacrypt tool uses.
-v2	(Default) Specifies the version of encryption that the anacrypt tool uses.
-v3	(Enhanced security version) Specifies the version of encryption that the anacrypt tool uses.
-i	Generate security.tuz file.
-h	Show the help screen.

Examples

The following examples illustrate the use of the anacrypt.exe file.

Example 1

Generating a security.tuz file with password 1234abcd (using the v3 encryption process):

C:\>**anacrypt -i -p 1234abcd -v3**

Example 2

Generating a security.tuz file with password 1234abcd (using the v2 encryption process):

C:\>**anacrypt -i -p 1234abcd**

or

C:\>**anacrypt -i -p 1234abcd -v2**

Example 3

Generating a security.tuz file with password 1234abcd (using the v1 encryption process):

C:\>**anacrypt -i -p 1234abcd -v1**

Example 4

Encrypting a single aastra.cfg file with password 1234abcd (using the v3 encryption process):

C:\>**anacrypt aastra.cfg -p 1234abcd -v3**

Example 5

Encrypting a <mac>.cfg file with password 1234abcd (using the v3 encryption process):

C:\>**anacrypt 00085d000000.cfg -p 1234abcd -v3**

Example 6

Encrypting a <mac>.cfg file with password 1234abcd using MAC encryption (using the v3 encryption process):

C:\>**anacrypt 00085d000000.cfg -m -p 1234abcd -v3**

Example 7

Encrypting all cfg files in C:\data with password 1234abcd using MAC encryption and generating a security.tuz file at the same time (using the v3 encryption process):

C:\>**anacrypt -d C:\data -p 1234abcd -m -i -v3**

Example 8

Encrypting all cfg files in C:\data with password 1234abcd and generating a security.tuz file at the same time (using the v3 encryption process):

C:\>**anacrypt -d C:\data -p 1234abcd -i -v3**

Configuration Server

Configuration Server Protocol

You can download new versions of software and configuration files from the configuration server to the BluStar 8000i and BluStar for Conference Room using any of the following types of protocols:

- TFTP
- FTP
- HTTP
- HTTPS

For each protocol, you can specify the path for which the configuration files are located on the server.

For HTTP and HTTPS you can also specify the port number to use for downloading the configuration files.

For FTP you can configure a username and password that are authenticated by the FTP server.

Note:

The configuration server can be configured from configuration files (see Configuration Server Settings on page 2-10), DHCP (see DHCP on page 3-3) and from the BluStar device UI (see Terminal Identity on page 4-5).

When loading the .cfg/.tuz and .csv files, FTP uses the username and password from the FTP URL in the configuration file. If a password is not provided, it tries anonymous access.

Configuration Server Settings

The configuration server stores the configuration files and the software to perform software upgrades to the BluStar 8000i and BluStar for Conference Room. A system administrator can configure the parameters listed in the table below for the configuration server set for loading the aastra.cfg, <model>.cfg, and <mac>.cfg files (or .tuz encrypted equivalents). For loading the user configuration files, the "**user config url**" parameter is used.

Parameters in Configuration Files	Description
Download Protocol Setting	
download protocol	Protocol to download configuration files. Valid values are: TFTP FTP HTTP HTTPS For example, download protocol: HTTP For DHCP to automatically populate the IP address or domain name for the download servers, your DHCP server must support Option 66. For more information, see DHCP on page 3-3.
download timeout	Specifies the overall timeout (seconds) for downloading the configuration files (aastra.cfg, <model>.cfg, and <mac>.cfg [or .tuz encrypted equivalents]). For example, download timeout: 40
download connect timeout	Complements the "download timeout" parameter. Whereas the "download timeout" parameter is used to specify the timeout for downloading the configuration files, the "download connect timeout" parameter specifies the amount of time allowed (in seconds) for the BluStar device to connect to the configuration server. For example, download connect timeout: 20

Parameters in Configuration Files	Description
pbx mode	Specifies the call server mode for the BluStar device (SIP Call Server or BluStar Application Server). For example, !pbx mode: 1 **Note:** If configuration server details are being set by the DHCP server, ensure that the locked parameter "**!pbx mode: 1**" is added to the aastra.cfg file for SIP Call Server mode (see Configuration Server Settings on page A-12 for parameter details). As the default server type is locally set to BluStar Application Server on the BluStar 8000i and BluStar for Conference Room and the local device settings take precedence over the configuration files, failure to lock the "**pbx mode**" parameter may cause the BluStar device to boot into BluStar Application Server mode upon a restart.
update url	The URL to upgrade the BluStar device software. For example, update url: ftp://10.55.102.56/aastracfg **Notes:** • The software upgrade process will be initiated on the first reboot after the parameter has been modified. • This parameter does not support TFTP.
user config url	The URL to load the user configuration files. For example, user config url: http://10.55.102.56/aastracfg/usercfg **Note:** The "user config url" parameter supports tftp, ftp, http, https, however only ftp, http, and https can be authenticated.
enable user configuration server redirection	Used to enable HTTP(S) redirection when downloading the user.cfg and downloading/uploading the user_local.cfg files in such cases where the user configuration files are located on the SIP call server node hosting the subscription. For example, enable user configuration server redirection: 1
telephone integration url	The URL (http or https) that the BluStar device calls to perform SIP Call Server integration. This is done during the login sequence and later to activate/deactivate server side feature integration, such as DND, Call Forward, etc. For example, telephony integration url: http://myserver.com/integration.php
telephony integration use login credentials	By default the BluStar 8000i and BluStar for Conference Room use SIP credentials to authenticate (digest method) to the SIP Call Server integration server. Enabling this configuration parameter makes the device use the user login/password instead. For example, telephony integration use login credentials: 1
telephony integration needs sip registration	Used by the telephony integration API to indicate to the software if SIP registration is needed before sending a user command via the API. When enabled, the BluStar device checks the extension registration status before sending an API command. If the extension is not registered, an error message is displayed. For example, telephony integration needs sip registration: 1
tftp server	The TFTP server's IP address. If DHCP is enabled and the DHCP server provides the information, this field is automatically populated. Use this parameter to change the IP address or domain name of the TFTP server. This will become effective after this configuration file has been downloaded into the BluStar device. For example, tftp server: 192.168.0.130 **Note:** For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
tftp path	Specifies the path name for which the configuration files reside on the TFTP server for downloading to the BluStar device. For example, tftp path: configs\tftp **Note:** Enter the path name in the form folderX\folderX. For example, **blustar8000i\configfiles.**
ftp server	The FTP server's IP address or network host name. This will become effective after this configuration file has been downloaded into the BluStar device. For example, ftp server: 192.168.0.131 **Optional**: You can also assign a username and password for access to the FTP server. See the "**ftp username**" and "**ftp password**" parameters for setting these credentials.
ftp path	Specifies the path name for which the configuration files reside on the FTP server for downloading to the BluStar device. For example, ftp path: configs\ftp If the device's configuration and software files are located in a sub-directory beneath the server's root directory, the relative path to that sub-directory should be entered in this field.

Parameters in Configuration Files	Description
ftp username	The username to enter for accessing the FTP server. This will become effective after this configuration file has been downloaded into the BluStar device. For example, ftp username: aastraconfig The BluStar 8000i and BluStar for Conference Room support usernames containing dots (“.”).
ftp password	The password to enter for accessing the FTP server. This will become effective after this configuration file has been downloaded into the BluStar device. For example, ftp password: 1234
http server	The HTTP server’s IP address. This will become effective after this configuration file has been downloaded into the BluStar device. For example, http server: 192.168.0.132 Optional: You can also assign an HTTP relative path to the HTTP server. See the next parameter (http path).
http path	Specifies the path name for which the configuration files reside on the HTTP server for downloading to the IP BluStar device. For example: http path: blustar/1 If the device’s configuration and firmware files are located in a sub-directory beneath the server’s HTTP root directory, the relative path to that sub-directory should be entered in this field.
http port	Specifies the HTTP port that the server uses to load the configuration to the BluStar device over HTTP. The default port is 80. For example: http port: 1025
https server	The HTTPS server’s IP address. This will become effective after this configuration file has been downloaded into the BluStar device. For example: https server: 192.168.0.143 Optional: You can also assign an HTTPS relative path to the HTTPS server. See the next parameter (https path).
https path	Specifies the path name for which the configuration files reside on the HTTPS server for downloading to the IP BluStar device. For example: http path: blustar/1 If the device’s configuration and firmware files are located in a sub-directory beneath the server’s HTTPS root directory, the relative path to that sub-directory should be entered in this field.
https port	Specifies the HTTPS port that the server uses to load the configuration to the BluStar device over HTTPS. The default port is 80. For example: https port: 1025
Auto-Resync Setting	
auto resync mode	Enables and disables the BluStar 8000i and BluStar for Conference Room to be updated automatically once a day at a specific time in a 24-hour period. This parameter works with TFTP, FTP, and HTTP servers. **Notes:** • Any changes made using the BluStar device are not overwritten by an auto-resync update. Auto-resync affects the configuration files only. • The resync time is based on the local time of the BluStar device. • If the BluStar device is in use (not idle) at the time of the resync check, the reboot occurs when the BluStar device becomes idle. • The automatic update feature works with both encrypted and plain text configuration files. For more information, see Using the Auto-Resync Feature on page 2-13.

Parameters in Configuration Files	Description
auto resync time	Sets the time of day in a 24-hour period for the BluStar device to be automatically updated. This parameter works with TFTP, FTP, and HTTP servers. **Notes:** • The resync time is based on the local time of the device. • The value of 00:00 is 12:00 A.M. • When entering a value for this parameter using the configuration files, the value can be entered using minute values from 00 to 59 (for example, the auto resync time can be entered as 02:56). For more information, see Using the Auto-Resync Feature on page 2-13.
auto resync max delay	Specifies the maximum time, in minutes, the BluStar device waits past the scheduled time before starting a checksync. For more information, see Using the Auto-Resync Feature on page 2-13.

Configuring the Configuration Server Protocol

Use the following procedure to configure the configuration server protocol.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Configuration Server Settings on page A-12.

Configuration Server Redundancy via DNS A Records

The BluStar 8000i and BluStar for Conference Room send a DNS query and in the DNS response, it accepts the first server IP address and contacts that server, ignoring any additional IP addresses in the response. This allows service providers to manage load balancing (via the DNS server putting different records first on each request), but does not provide redundancy.

Using the Auto-Resync Feature

The auto-resync feature on the BluStar 8000i and BluStar for Conference Room allows an administrator to enable the device to be updated automatically once a day at a specific time in a 24-hour period if the files on the server have changed. This feature works with TFTP, FTP, HTTP, and HTTPS servers. An administrator can enable this feature using the configuration files (aastra.cfg, <model>.cfg, and <mac>.cfg).

In the configuration files, you can set the following parameters:

- **"auto resync mode"** - Determines whether the configuration server automatically updates the BluStar device's configuration files or disables automatic updates. This parameter works with TFTP, FTP, HTTP, and HTTPS servers.
- **"auto resync time"** - Sets the time of day in a 24-hour period for the BluStar device to be automatically updated. This parameter works with TFTP, FTP, HTTP and HTTPS servers.
- **"auto resync max delay"** - Specifies the maximum time, in minutes, the BluStar device waits past the scheduled time before starting a checksync. Setting the "**auto resync max delay**" (Maximum Delay) parameter can greatly reduce the load placed on the configuration server when downloading configurations.

Notes:

- Any changes made using the BluStar device are not overwritten by an auto-resync update. Auto-resync affects the configuration files only.
- If the BluStar device is in use (not idle) at the time of the resync check, the reboot occurs when the device becomes idle.
- The resync time is based on the local time of the BluStar device.
- The automatic update feature works with both encrypted and plain text configuration files.

Enabling Auto-Resync Using the Configuration Files

Use the following procedure to configure automatic updates of the firmware, configuration files, or both.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Configuration Server Settings on page A-12.

Chapter 3
Configuring Network Features

This chapter provides the information required to configure Network Settings and SIP Account Settings on the BluStar 8000i and BluStar for Conference Room via the configuration files.

Network Settings

This section describes the following information:

- Basic Network Settings
- DHCP
- Configuration Server Download Precedence
- DNS Caching
- Configuring Network Settings Manually
- Configuring LAN and PC Port Negotiation
- Network Time Servers
- Internet Access Using HTTP Proxy
- Type of Service (ToS), Quality of Service (QoS), and DiffServ QoS
- Virtual Local Area Network (VLAN)
- Virtual Private Network (VPN)
- SIP Account Settings

Basic Network Settings

If Dynamic Host Configuration Protocol (DHCP) is enabled, the BluStar device automatically configures all of the network settings. If the device cannot populate the network settings, or if DHCP is disabled, you can set the network options manually.

Parameters in Configuration Files	Description
dhcp	Enables or disables DHCP. Enabling DHCP populates the required network information. The DHCP server provides the network information that the BluStar device requires. If the device is unable to get any required information, then you must enter it manually. DHCP populates the following network information: IP Address, Subnet Mask, Gateway, Domain Name Servers (DNS), HTTP HTTPS, TFTP, and FTP servers, and time servers. For example, dhcp: 1 For more information, see DHCP on page 3-3.
ip	IP address of the BluStar device. To assign a static IP address, disable DHCP. For example, ip: 192.168.0.25 For more information, see Configuring Network Settings Manually on page 3-7.
subnet mask	Subnet mask defines the IP address range local to the BluStar device. To assign a static subnet mask, disable DHCP. For example, subnet mask: 255.255.255.224 For more information, see Configuring Network Settings Manually on page 3-7.

Parameters in Configuration Files	Description
default gateway	The IP address of the network's gateway or default router IP address. To assign a static Gateway IP address, disable DHCP. For example, default gateway: 192.168.0.1 For more information, see Configuring Network Settings Manually on page 3-7.
dns1	Primary domain name server (DNS) IP address. For any of the IP address settings on the BluStar device, a domain name value can be entered instead of an IP address. With the help of the domain name servers, the domain names for such parameters can then be resolved to their corresponding IP addresses. For example, dns1: 192.168.0.5 To assign static DNS addresses, disable DHCP. If a host name is configured on the BluStar device, you must also set a DNS. For more information, see Configuring Network Settings Manually on page 3-7.
dns2	A service that translates domain names into IP addresses. To assign static DNS addresses, disable DHCP. For example, dns2: 192.168.0.6 For more information, see Configuring Network Settings Manually on page 3-7.
ethernet port 0	The send (TX) and receive (RX) method to use on Ethernet port 0 to transmit and receive data over the LAN. For example, ethernet port 0: 3 (half-duplex, 10Mbps) For more information on configuring the LAN and PC port negotiation, see Configuring LAN and PC Port Negotiation on page 3-8.
time server disabled	This parameter allows you to enable or disable the Network Time Server (NTP) to set the time on the BluStar device. This parameter affects the "time server1", "time server2", and "time server3" parameters. Setting this parameter to '0' allows the use of the configured Time Server(s). Setting this parameter to '1' prevents the use of the configured Time Server(s). For more information on this feature, see Network Time Servers on page 3-9.
time server1	This parameter allows you to set the IP address of Time Server 1 in dotted decimal format. For more information on this feature, see Network Time Servers on page 3-9.
time server2	This parameter allows you to set the IP address of Time Server 2 in dotted decimal format. For more information on this feature, see Network Time Servers on page 3-9.
time server3	This parameter allows you to set the IP address of Time Server 3 in dotted decimal format. For more information on this feature, see Network Time Servers on page 3-9.

DHCP

The BluStar 8000i and BluStar for Conference Room is capable of querying a DHCP server, allowing a network administrator a centralized and automated method of configuring various network parameters for the BluStar device.

If DHCP is enabled, the device requests the following network information:

- Subnet Mask
- Gateway (i.e. router)
- Domain Name Server (DNS)
- Network Time Protocol Server
- IP Address
- TFTP Server
- TFTP Path
- FTP Server
- FTP Path
- HTTP Server
- HTTP Path
- HTTP Port
- HTTPS Server
- HTTPS Path
- HTTPS Port

The network administrator chooses which of these parameters (if any) are supplied to the device by the DHCP server. The administrator must configure the device manually to provide any required network parameters not supplied by the DHCP server.

Notes:

- For DHCP to automatically populate the IP address or domain name for the TFTP, FTP, HTTP, or HTTPS configuration servers, your DHCP server must support download protocols according to RFC2131 and RFC1541 for Options 43,160, 159, and 66.
- If configuration server details are being set by the DHCP server, ensure that the locked parameter "**!pbx mode: 1**" is added to the aastra.cfg file for SIP Call Server mode (see Configuration Server Settings on page A-12 for parameter details). As the default server type is locally set to BluStar Application Server on the BluStar 8000i and BluStar for Conference Room and the local device settings take precedence over the configuration files, failure to lock the "**pbx mode**" parameter may cause the BluStar device to boot into BluStar Application Server mode upon a restart.

To Enable/Disable DHCP:

Use the following procedure to enable/disable DHCP on the BluStar device using the configuration files.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Network Settings on page A-4.

DHCP Options 66, 60, 43, and 132

Option 66

The BluStar 8000i and BluStar for Conference Room support download protocols according to RFC2131 and RFC1541 (TFTP, FTP, HTTP, HTTPS) to support DHCP option 66. Option 66 is part of the DHCP offer message that the DHCP server generates to tell the BluStar device which configuration server it should use to download new firmware and configuration files.

For DHCP to automatically populate the IP address or domain name for the servers, your DHCP server must support Option 66. Option 66 is responsible for forwarding the server's IP address or domain name to the device automatically. If your DHCP server does not support Option 66, you must manually enter the IP address or domain name for your applicable configuration server into your device configuration.

Option 60 and 43

The BluStar 8000i and BluStar for Conference Room also support Option 60 and Option 43 as referenced in RFC 2132.

Option 60 (Vendor Class Identifier) provides the DHCP server with a unique identifier for each BluStar model. This enables a system administrator to send the device a customized server configuration in Option 43.

For example, for the BluStar 8000i and BluStar for Conference Room, the identifier values would be the following:

Model	Identifier Value
8000i	AastraBluStar8000i
BluStar for Conference Room	AastraBluStar8000icr

Option 43 consists of the following sub-options:

Sub-Option/Code	Description
02	Configuration server (protocol, server, and path)
08	ID string to enable the use of the VLAN identity in sub-option/code 09. Must be specified to avoid conflict with other vendors.
09	VLAN ID value.

The system administrator can use the Vendor Class Identifier to send the BluStar device a customized Server Configuration in Option 43 (vendor-specific information).

Note:

If the BluStar devices receive the server configuration from both DHCP Option 66 and Option 43, Option 43 takes precedence over Option 66.

Using Option 43 to Customize the BluStar Device

A system administrator can customize the BluStar device in the network by enabling sub-option 02 to send configuration server information using one of the following formats:

Sub-Option/Code	Protocol	Format
02	HTTP	http://<server>/<path>
02	HTTPS	https://<server>/<path>
02	TFTP	tftp://tftpserver
02	FTP	ftp://user:password@ftpserver

Using Option 43 to Transfer VLAN ID Assignment Using DHCP

f using DHCP Option 43 to assign the VLAN ID, the following sub-options are utilized. Additionally, the corresponding rules must be followed:

Sub-Option /Code	Description	Rule
08	ID string to enable the use of the VLAN identity in sub-option/code 09. Must be specified to avoid conflict with other vendors.	Must be the 16-byte character string "Aastra{space}Telecom{space}{space}" (i.e. Aastra Telecom followed by two space characters). 16-byte hex equivalent: 41617374726120546563686f6d2020
09	VLAN ID value	Must be 4 bytes, whereas the first and second byte must be 0x00, and the third and fourth bytes encompass the VLAN ID. The valid range of the VLAN ID is 1 - 4094. For example, a VLAN ID of 100 (in dec) is 00 00 00 64 in hex.

Option 132 (802.1P VLAN ID)

Administrators can alternatively use the "**dhcp option 132 vlan id enabled**" parameter for VLAN ID assignment by DHCP Option 132. Option 132 provides the same functionality as Option 43 but the data format of the VLAN ID must be 2 bytes, whereas the first and second byte encompass the VLAN ID (the valid range of the VLAN ID being 1 - 4094).

Note:
DHCP Option 43 has precedence over DHCP Option 132.

To Configure DHCP Option 132 (802.1P VLAN ID):

Use the following procedure to configure DHCP Option 132 on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, DHCP Option Settings on page A-10.

Using Option 12 Hostname

If you set the BluStar device to use DHCP Option 12, it automatically sends this option to the configuration server. This option specifies the hostname (name of the client). The name may or may not be qualified with the local domain name (based on RFC 2132). See RFC 1035 for character set restrictions.

Notes:
- The hostname of [<model><MAC address>] automatically populates the field on initial startup of the device.
- If the configuration server sends the hostname back to the device in a DHCP Reply Packet, the hostname is ignored.

An administrator can change the "**hostname**" parameter for the DHCP Option 12 via the configuration files.

To Configure DHCP Option 12 Hostname:

Use the following procedure to configure DHCP Option 12 Hostname on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, DHCP Option Settings on page A-10.

Using Option 77 User Class

DHCP Option 77 User Class is sent in DHCP request packets from the BluStar device to the configuration server. Option 77 defines specific User Class identifiers to convey information about a device's software configuration or about its user's preferences.

For example, you can use the User Class Option to configure all BluStar 8000is in the Accounting Department with different user preferences than the BluStar 8000is in the Marketing Department. A DHCP server uses the User Class option to choose the address pool for which it allocates an address from, and/or to select any other configuration option.

Notes:

- If the User Class is not specified (left blank) in the DHCP request packet, the BluStar device does not send the User Class DHCP Option 77.
- Multiple User Classes inside a DHCP Option 77 are not supported.
- DHCP Option 77 may affect the precedence of DHCP Options, dependent on the DHCP Server.

An administrator can configure the "**dhcp userclass**" parameter via the configuration files.

To Configure DHCP Option 77 User Class:

Use the following procedure to configure DHCP Option 77 User Class on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, DHCP Option Settings on page A-10.

Using Options 159 and 160

In addition to DHCP Option 66, the BluStar 8000i and BluStar for Conference room also supports DHCP Options 159 and 160. The devices use the following order of precedence when deriving the configuration server parameters: 43, 160, 159, 66.

An administrator can override this order of precedence by setting the **"dhcp config option override"** parameter. Setting this parameter results in the device only using the chosen DHCP option and ignoring the other options.

For more information about setting DHCP download preference, see Configuration Server Download Precedence on page 3-7.

WARNING!

Administrators should review the updated DHCP option precedence order and configuration options to avoid potential impact to existing Aastra BluStar 8000i and BluStar for Conference Room deployments.

To Configure DHCP Download Options on the BluStar Device:

Use the following procedure to configure DHCP Option Override on the BluStar device:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, DHCP Option Settings on page A-10.

Configuration Server Download Precedence

An administrator can set the BluStar device's download precedence to ignore DHCP, **(only during the boot when the remote configuration server is contacted)** and use the following precedence instead:

1. DHCP *,
2. Configuration URI, and then,
3. Direct configuration.

* DHCP is first unless it is disabled (override = "-1")

To configure the download precedence, you use the option value "-1" as the value for the "**dhcp config option override**" parameter in the configuration files. Setting this parameter to "-1" causes all DHCP configuration options to be ignored.

To Configure a Download Precedence Using the Configuration Files:

Use the following procedure to configure the DHCP Download Precedence using the configuration files:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, DHCP Option Settings on page A-10.

DNS Caching

The BluStar 8000i and BluStar for Conference Room have the ability to cache DNS requests according to RFC1035 and RFC2181. The devices cache DNS lookups according to the TTL field, so that it only performs another lookup for an address when the TTL expires.

Configuring Network Settings Manually

If you disable DHCP on your device, you need to configure the following network settings manually:

- IP Address
- Subnet Mask
- Gateway
- Primary DNS
- Secondary DNS

To Configure a Network Settings Manually:

You can configure the network settings using the configuration files.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Network Settings on page A-4.

Configuring LAN and PC Port Negotiation

Ethernet is the computer networking technology for local area networks (LANs). You use the LAN Port to connect to a LAN using a twisted pair 10BASE-T cable to transmit 10BASE-T Ethernet. You use the PC Port to connect to the configuration server (your PC).

There are two Ethernet ports on the rear of the BluStar 8000i and front of the BluStar for Conference Room: LAN Port and PC Port .

The BluStar devices support each of the following methods of transmission:

- Auto-negotiation
- Half-duplex (10Mbps, 100Mbps, or 1000Mbps)
- Full-duplex (10Mbps, 100Mbps, or 1000Mbps)

Auto-negotiation

Auto-negotiation is when two connected devices choose common transmission parameters. In the auto-negotiation process, the connected devices share their speed and duplex capabilities and connect at the highest common denominator (HCD). Auto-negotiation can be used by devices that are capable of different transmission rates (such as 10Mbps/sec, 100Mbps/sec, or 1000Mbps/sec), different duplex modes (half duplex and full duplex) and/or different standards at the same speed. You can set the LAN and PC Ports on the BluStar devices to auto-negotiate during transmission.

Half-Duplex (10Mbps, 100Mbps, or 1000Mbps)

Half-duplex data transmission means that data can be transmitted in both directions on a signal carrier, but not at the same time. For example, on a LAN using a technology that has half-duplex transmission, one device can send data on the line and then immediately receive data on the line from the same direction in which data was just transmitted. Half-duplex transmission implies a bidirectional line (one that can carry data in both directions). On the BluStar devices, you can set the half-duplex transmission to transmit in 10Mbps, 100Mbps, or in 1000Mbps.

Full-Duplex (10Mbps, 100Mbps, or 1000Mbps)

Full-duplex data transmission means that data can be transmitted in both directions on a signal carrier at the same time. For example, on a LAN with a technology that has full-duplex transmission, one device can be sending data on the line while another device is receiving data. Full-duplex transmission implies a bidirectional line (one that can move data in both directions). On the BluStar devices, you can set the full-duplex transmission to transmit in 10Mbps, 100Mbps, or in 1000Mbps.

To Configure the LAN Port:

You can configure the "**ethernet port 0**" parameter using the configuration files.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Network Settings on page A-4.

Network Time Servers

A time server is a computer server that reads the actual time from a reference clock and distributes this information to the clients in a network. The time server may be a local network time server or an internet time server.

The Network Time Protocol (NTP) is the most widely used protocol that distributes and synchronizes time in the network with the time on the time server. You can enable a time server to synchronize time on the BluStar 8000i and BluStar for Conference Room with the time server you specify. The time server is enabled by default.

An administrator can use the configuration files to enable/disable the time server using the "**time server disabled**" parameter, and specify a time server 1, time server 2, and/or time server 3 using the "**time server1**", "**time server2**", and/or "**time server3**" parameters.

To Configure the NTP Servers:

Use the following procedure to enable/disable the time server and optionally set the IP address of time servers 1, 2, and/or 3.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Network Settings on page A-4.

Internet Access Using HTTP Proxy

Proxy servers are commonly employed in corporate network environments serving as a security barrier between the company's internal network and the Internet. With this in mind, the parameter "**internet proxy**" is available allowing administrators the option of defining an HTTP Internet proxy that respective applications will use to gain access to the Internet.

To Configure the HTTP Internet Proxy Setting:

Use the following procedure to configure the HTTP Internet proxy setting.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Network Settings on page A-4.

Type of Service (ToS), Quality of Service (QoS), and DiffServ QoS

ToS is an octet as a field in the standard IP header. It is used to classify the traffic of the different QoSs.

QoS provides service differentiation between IP packets in the network. This service differentiation is noticeable during periods of network congestion (for example, in case of contention for resources) and results in different levels of network performance.

Differentiated Service (DiffServ) QoS is class-based where some classes of traffic receive preferential handling over other traffic classes.

The Differentiated Services Code Point (DSCP) value is stored in the first six bits of the ToS field. Each DSCP specifies a particular per-hop behavior that is applied to a packet. DSCP bits in the ToS field of the IP header are set for SIP and RTP (audio and video) packets using either the default values or the values configured via the following parameters.

Parameters in Configuration Files	Description
tos sip	Specifies the Differentiated Services Code Point (DSCP) for SIP packets.
tos rtp	Specifies the Differentiated Services Code Point (DSCP) for audio RTP packets.
tos rtp video	Specifies the Differentiated Services Code Point (DSCP) for video RTP packets.

Note:
ToS/DSCP is enabled by default and the "**tos sip**", "**tos rtp**", and "**tos rtp video**" parameters have default values of 46.

To Configure ToS/QoS/DiffServ QoS:

Use the following procedures to configure ToS/QoS/DiffServ QoS.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, ToS/QoS/Diffserv QoS Parameters on page A-8.

Virtual Local Area Network (VLAN)

VLAN is a feature on the BluStar 8000i and BluStar for Conference Room that allows for multiple logical Ethernet interfaces to send outgoing RTP packets over a single physical Ethernet as described in IEEE Std 802.3. On the devices, you configure a VLAN ID that associates with the physical Ethernet port 0 (LAN port).

By configuring specific VLAN parameters, the device has the capability of adding tags and processing the ID and priority information contained within the tag.

VLAN on the BluStar devices is disabled by default. When you enable VLAN, the device provides defaults for all VLAN parameters. If you choose to change these parameters, you can configure them using the configuration files.

The following parameters allow an administrator to configure the VLAN feature:

Parameters in Configuration Files	Description
Global	
tagging enabled	Enables or disables VLAN on the BluStar device.
LAN Port	
vlan id	Used to configure a VLAN ID that associates with the physical Ethernet Port 0.
qos eth port 0 priority	Specifies the priority value used for all traffic (e.g. SIP, RTP, etc.) on the physical Ethernet Port 0.
PC Port	
vlan id port 1	Specifies the VLAN ID used to pass packets through to a PC via Port 1.
qos eth port 1 priority	Specifies the priority value used for passing VLAN packets through to a PC via Port 1.

Notes:

- In order for the software to successfully maintain connectivity with a network using VLAN functionality, the device must be restarted if you modify the "**tagging enabled**", "**vlan id**", or "**vlan id port 1**" parameters.
- Traffic from both Ethernet Port 0 and Ethernet Port 1 must be tagged with the appropriate VLAN IDs. Packets tagged with other VLAN IDs or untagged packets will be discarded by the respective port.
- VLAN ID can also be assigned using DHCP Option 43 or Option 132. For more information, see DHCP Options 66, 60, 43, and 132 on page 3-3.

To Configure VLAN:

Note:

VLAN functionality can be enabled/disabled through the BluStar device's UI. For more information, see Terminal Identity on page 4-5.

Use the following procedures to configure the VLAN feature.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Virtual Local Area Network (VLAN) Settings on page A-9.

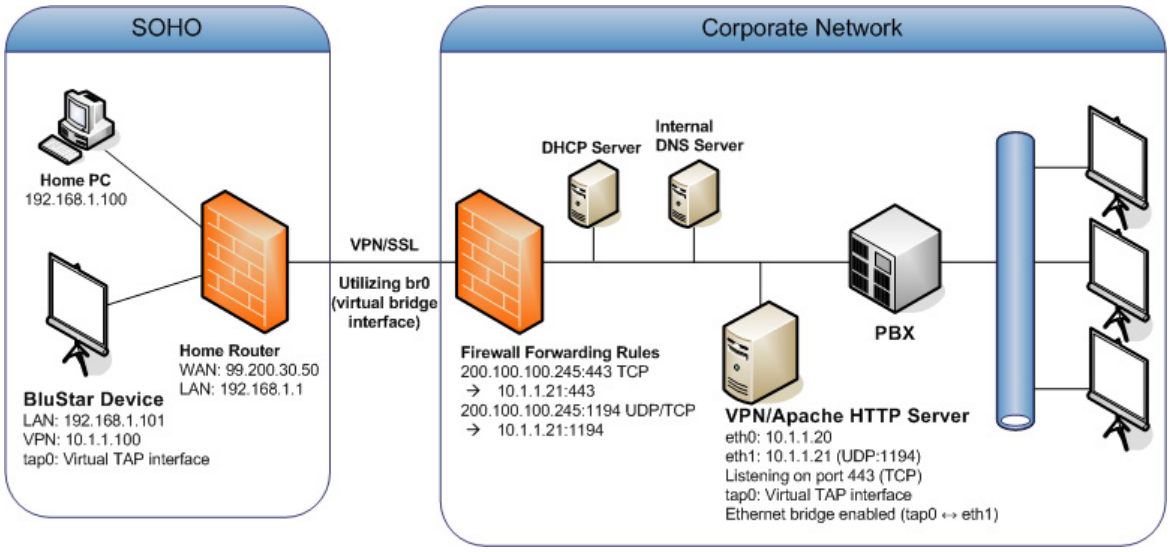
Virtual Private Network (VPN)

The BluStar devices integrate an OpenVPN client for authentication and remote access to the corporate network. OpenVPN is a highly-flexible open-source VPN application available for a multitude of operating systems that utilizes SSL/TLS for key exchange. Utilizing OpenVPN Access Server, administrators can set up and configure their networks to allow remote devices access to the corporate network ensuring that all the conferencing and collaboration capabilities of the BluStar devices can be fully utilized in a remote environment.

Note:
VPN is a licensed feature. See Licensing on page 4-53 for more information.

Overview

The image below details an overview of how OpenVPN can be implemented in a typical corporate environment.



Server-Side

On the server-side, an ethernet bridge is created with tap0 (i.e. a virtual TAP interface) and eth1 (i.e. the secondary ethernet card). Any broadcasted or received traffic from tap0 is duplicated to eth1 and vice versa.

Client-Side

On the client side, once the connection to the server has been established, the following tunnel is created:

- Client tap0 <br0> Server tap0 <Ethernet Bridge> eth1 <-> Corporate LAN.

The client will send a DHCP request through the tunnel to the DHCP server on the corporate network and the DHCP reply will be sent back to the client allowing for the client to receive an internal IP on tap0.

After the internal IP has been established, the client's BluStar device will function through the VPN (i.e. function as a local device on the corporate network).

Note:
Once an internal IP is established, the client's default gateway will be switched to the server; therefore all internet traffic from the client will run through the server as well.

Configuring the Network for OpenVPN

Sample configuration files/scripts and a simplified configuration example using Fedora 13 is available in Appendix C. "OpenVPN Configuration".

SIP Account Settings

Description

The BluStar 8000i and BluStar for Conference Room use Session Initiation Protocol (SIP) account information to register with the SIP Call Server. The BluStar devices define network and user account parameters that apply to all lines/call appearances. You configure and modify these parameters and associated values using the configuration files. Basic SIP settings include authentication and network settings. Advanced SIP settings include other features you can configure on the BluStar device.

This section describes the following information:

- Basic SIP Settings
- Advanced SIP Settings (optional)
- Real-time Transport Protocol (RTP) Settings

Basic SIP Settings

The BluStar 8000i and BluStar for Conference Room have one SIP account with two lines/call appearances. The following table identifies the SIP authentication and network parameters on the BluStar devices.

SIP Authentication Parameters

Parameters in Configuration Files	Description
sip user name	User name used in the name field of the *SIP URI* for the BluStar device and for registering the device at the registrar. Valid values are up to 20 alphanumeric characters. For example, sip user name: 1010
sip display name	Used in the display name field of the *From* SIP header field. Some IP PBX systems use this as the caller's ID and some may overwrite this with the string that is set at the PBX system. Valid values are up to 20 alphanumeric characters. For example, sip display name: Joe Smith
sip screen name	Used to display text on the screen of the BluStar device. You may want to set this parameter to display the user's name on the BluStar device. Valid values are up to 20 alphanumeric characters. For example, sip screen name: Joe Smith
sip screen name 2	Used to display text on a second line on the screen of the BluStar device. Valid values are up to 20 alphanumeric characters. For example, sip screen name 2: Lab Phone
sip auth name	Used in the username field of the Authorization header field of the SIP REGISTER request. Valid values are up to 20 alphanumeric characters. For example, sip auth name: 5553456
sip password	Password used to register the BluStar device with the SIP proxy. Valid values are up to 20 alphanumeric characters. Passwords are encrypted and display as asterisks when entering. For example, sip password: 12345
sip mode	The mode-type that you assign to the BluStar device. Valid values are Generic (0), BroadSoft SCA (1), Reserved for (2), or BLA (3). Default is Generic (0). For example, sip mode: 2

SIP Network Parameters

Parameters in Configuration Files	Description
sip proxy ip	The IP address of the SIP proxy server for which the BluStar device uses to send all SIP requests. A SIP proxy is a server that initiates and forwards requests generated by the device to the targeted user. For example, sip proxy ip: 192.168.0.101
sip proxy port	The proxy server's port number. Default is 0. For example, sip proxy port: 5060
sip outbound proxy	This is the address of the outbound proxy server. All SIP messages originating from the BluStar device are sent to this server. For example, if you have a Session Border Controller in your network, then you would normally set its address here. Default is 0.0.0.0. For example, sip outbound proxy: 10.42.23.13
sip outbound proxy port	The proxy port on the proxy server to which the BluStar device sends all SIP messages. Default is 0. For example, sip outbound proxy port: 5060
sip registrar ip	The address of the registrar for which the BluStar device uses to send *REGISTER* requests. A SIP registrar is a server that maintains the location information of the BluStar device. A value of 0.0.0.0 disables registration. However, the BluStar device is still active and you can dial using the username@ip address of the BluStar device. For example, sip registrar ip: 192.168.0.101
sip registrar port	The registrar's port number. Default is 0. For example, sip registrar port: 5060
sip registration period	The requested registration period, in seconds, from the registrar. For example, sip registration period: 3600

To Configure SIP Settings:

Use the following procedure to configure the SIP Authentication and Network Settings on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, SIP Settings on page A-21.

Advanced SIP Settings (optional)

Advanced SIP Settings on the BluStar device allow you to configure specific features. The following list provides Advanced SIP Settings that you can configure using the configuration files.

Advanced SIP Settings

Parameters in Configuration Files	Description
sip explicit mwi subscription	If the BluStar device has a message waiting subscription with the service provider, a message waiting indicator (MWI) (LED or display icon) tells the user there is a message on the BluStar device. This parameter is disabled by default. For example, sip explicit mwi subscription: 1
sip explicit mwi subscription period	The requested duration, in seconds, before the MWI subscription times out. The BluStar device re-subscribes to MWI before the subscription period ends. Default value is 86400. For example, sip explicit mwi subscription period: 30
sip send mac	Adds an "Aastra-Mac:" header to the SIP REGISTER messages sent from the BluStar device to the call server, where the value is the MAC address of the BluStar device. For example, sip send mac: 1 For more information, see MAC Address in REGISTER Messages on page 5-2.
sip session timer	The time, in seconds, that the BluStar device uses to send periodic re-INVITE requests to keep a session alive. The proxy uses these re-INVITE requests to maintain the status' of the connected sessions. See RFC4028 for details. Default is 0. For example, sip session timer: 30
sip T1 timer sip T2 timer	These timers are SIP transaction layer timers defined in RFC 3261. Timer 1 is an estimate, in milliseconds, of the round-trip time (RTT). Timer 2 represents the amount of time, in milliseconds, a non-INVITE server transaction takes to respond to a request. For example, sip T1 timer: 600 For example, sip T2 timer: 8
sip transaction timer	The amount of time, in milliseconds that the BluStar device allows the callserver (registrar/proxy) to respond to SIP messages that it sends. If the BluStar device does not receive a response in the amount of time designated for this parameter, the device assumes the message has timed out. For example, sip transaction timer: 6000

To Configure Advanced SIP Settings

Use the following procedures to configure the Advanced SIP Settings on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Advanced SIP Settings on page A-26.

Real-time Transport Protocol (RTP) Settings

Real-time Transport Protocol (RTP) is used as the bearer path for media packets sent over the IP network. Information in the RTP header tells the receiver how to reconstruct the data and describes how the bit streams are packetized (i.e. which codec is in use). Real-time Transport Control Protocol (RTCP) allows endpoints to monitor packet delivery, detect and compensate for any packet loss in the network. SIP and H.323 both use RTP and RTCP for the media stream, with User Datagram Protocol (UDP) as the transport layer encapsulation protocol.

You can set the following parameters for RTP on the BluStar 8000i and BluStar for Conference Room:

- sip rtp port
- sip rtp video port
- sip out-of-band dtmf
- sip dtmf method
- sip srtp mode

RTP Port and RTP Video Port

Administrators can configure the ports that the BluStar device will use for audio and video RTP packet transmission by defining the "**sip rtp port**" and "**sip rtp video port**" parameters in the configuration files.

Out-of-Band DTMF and DTMF Method

The BluStar 8000i and BluStar for Conference Room support out-of-band Dual-Tone Multifrequency (DTMF) mode according to RFC2833. The "**out-of-band DTMF**" parameter is enabled by default. In out-of-band mode, the DTMF audio is automatically clamped (muted) and DTMF digits are not sent in the RTP packets.

The "**sip dtmf method parameter**" is used to set the dual-tone multifrequency (DTMF) method used on the BluStar device to send DTMF digits from the device via INFO messages. You can set the DTMF method as RTP, SIP info, or both. Default is 0 (RTP).

The matrix below details DTMF behavior when the out-of-band DTMF and DTMF method settings are configured in various scenarios:

Configuration Parameter Setting		**DTMF Behavior**		
sip dtmf method	sip out-of-band dtmf	SIP INFO	In-Band DTMF	Out-of-Band DTMF (RFC2833)
RTP (0)	Disabled (0)	No	Yes	No
RTP (0)	Enabled (1)	No	No	Yes
SIP INFO (1)	Disabled (0)	Yes	No	No
SIP INFO (1)	Enabled (1)	Yes	No	Yes
RTP and SIP INFO (2)	Disabled (0)	Yes	Yes	No
RTP and SIP INFO (2)	Enabled (1)	Yes	No	Yes

RTP Encryption

The BluStar devices support the Secure Real-time Transfer Protocol (SRTP), using Session Description Protocol Security (SDES) key negotiation, for encryption and authentication of RTP/RTCP messages sent and received by the devices on the network.

Administrators and users can choose among three levels of SRTP encryption:

- SRTP Disabled (default): BluStar devices generate and receive non-secured RTP calls. If a BluStar device with SRTP disabled receives a call from an SRTP-enabled device, it ignores SRTP and tries to answer the call using RTP. If the calling device requires calls to utilize SRTP, the call fails; however, if SRTP is not a requirement, it will accept the call using RTP.

- Allow Secured Calls: The BluStar device generates SRTP calls, and accepts both SRTP and RTP calls. If the receiving device is not SRTP enabled, it sends a non-secured RTP call instead.
- Require Secured Calls: The BluStar device generates and accepts SRTP calls only. All other calls are rejected.

Note:
If you enable SRTP, then it is recommended to enable Transport Layer Security (TLS) for increased protection. This prevents capture of the key used for SRTP encryption. For more information on TLS see Transport Layer Security (TLS) on page 5-4.

During a call, if both the TLS feature and the "Allow Secured Calls" option are enabled, the following icons may appear on screen throughout the duration of the call indicating the BluStar device's level of security:

Icon	Description
	Displayed when signaling and all applicable media (i.e. audio for a voice only call, and both audio and video for a video call) are secure for the respective call.
	Displayed when signaling and audio are secure, but video is not secure.
	Displayed when signaling is secure, but audio is not secure (only applicable during a voice-only call).
	Displayed when signaling is secure, but audio and video are not secure.

Administrators have the option of configuring SRTP by defining the "**sip srtp mode**" parameter in the configuration files or by directly setting the SRTP mode through the BluStar device's UI.

To Configure SRTP Using the BluStar Device's UI:

1. Select the **App Menu** button.
2. Select **Tools** > **Call Handling**
3. Under the **Security** category, touch/click the box beside the **Allow Secure Calls** option.
   Skip to step 5 if you prefer to use SRTP for all calls but do not want to make it a requirement.
4. Touch/click the box beside the **Require Secure Calls** option to ensure that only SRTP calls are generated/accepted.
   Note:
   Leaving both options unchecked disables SRTP.
5. Select **Done**.

Configuring RTP Settings

Use the following procedures to configure the RTP settings on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, RTP Settings on page A-28.

Chapter 4
Configuring Operational Features

The BluStar 8000i and BluStar for Conference Room have specific operational features that you can configure. This chapter describes each feature and provides procedures for configuring BluStar devices to use the following features:

- Autologin Upon Restart
- Terminal Identity
- Factory Defaults
- Power Saving Eco-Off Mode
- User Settings
- Terminal Security Settings
- Screen Settings
- Locale Settings
- Audio/Video Settings
- Call Forward Settings
- Do Not Disturb Settings
- Call Waiting Settings
- Incoming Intercom Call Auto-Answer Settings
- History
- Directory
- Basic LDAP Settings
- Advanced LDAP Settings (optional)
- Microsoft Exchange Contacts
- LDAP Directory/Exchange Contacts Update Interval
- Voicemail
- Video Voicemail Client Integration
- Emergency Dial Plan
- Busy Lamp Field (BLF)
- BLF Subscription Period
- Directed Call Pickup
- BluStar Server Interoperability
- Visual Enhancement for BluStar Server Interoperability and Busy Lamp Field (BLF) Features
- Diversion Display
- Shared Call Appearance (SCA) and SCA Call Bridging
- XML Settings
- Licensing

BluStar Device Settings

Autologin Upon Restart

BluStar for Conference Room systems and BluStar 8000i terminals have the ability to automatically log in to a specified default account upon a manual restart, forced restart, or cold reboot. These three processes can be defined as follows:

- Manual restart - user initiated (e.g. when a user selects the **Restart** button).
- Forced restart - software initiated but influenced by a user's action (e.g. when a user changes a terminal setting whereby the device requires a restart for the setting to take effect).
- Cold reboot - when a software upgrade has been initiatedor when an interruption of power has occured (e.g. power failure or power cycle).

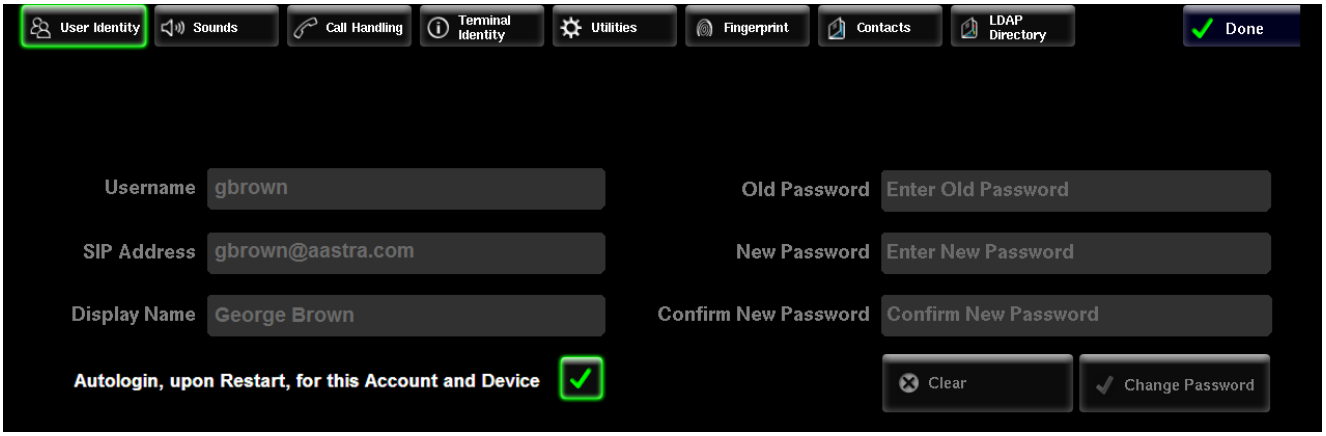
This feature is especially useful when a device is configured for one primary account as it ensures that the account is logged in automatically even after a cold reboot has occurred.

Notes:

- If a BluStar device is in a locked state before a forced restart, the device will still retain its locked state after it is restarted and automatically logged in.
- The configured autologin account will be removed if the device is reset to factory defaults.

Administrators can enable or disable this feature by defining the "**enable user autologin**" parameter in the aastra.cfg, <model>.cfg, or <mac>.cfg files. This feature is disabled by default.

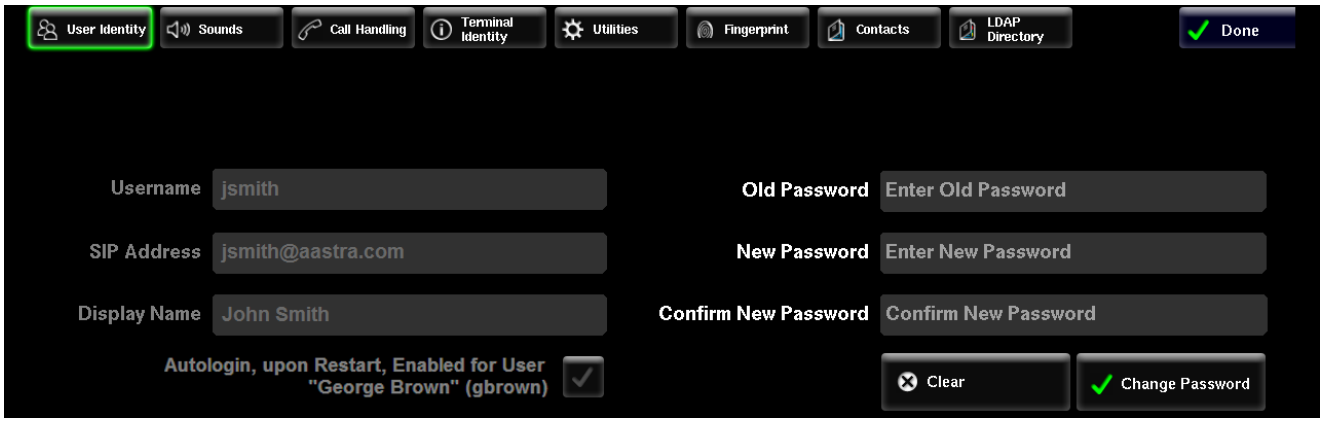
When enabled, users can configure their BluStar device to automatically login to a specified account by first logging in to the respective account, navigating to the **App Menu** > **Tools** > **User Identity** screen, and selecting the **Autologin, upon restart, for this account and device** option.



Note:

If it is required to change the default autologin account, users must log in to the currently configured autologin account and disable the feature there before another account can be selected.

When logged in to a different account, the **User Identity** screen will display the account to which the autologin feature is currently associated.



When a cold reboot of a BluStar device occurs (i.e. due to a software upgrade, power failure, or power cycle) a randomized countdown (from 5 to 20 seconds) will appear on screen before the device automatically logs in. If users are present, they can choose to login immediately by selecting the **Autologin now** button, or they can choose to simply wait until the countdown ends. Selecting the **Cancel** button will cancel the autologin process entirely.

The randomized countdown ensures that, within large deployments, servers are not overloaded with log in requests due to all the BluStar devices automatically logging in at the same time after a cold reboot.

Note:
The randomized countdown is only employed after a cold reboot.

For the BluStar for Conference Room, an additional button has been added to the login screen when the feature is enabled and an autologin account is configured (see Logging In on page 1-11 for login screen details). This autologin button allows users to quickly log in to the specified autologin account if the BluStar for Conference Room is at any time logged off. As the BluStar for Conference Room systems are generally deployed using a shared account, this button ensures that users can log in to the shared account quickly without having to remember the specific account details.

To Configure a Default Autologin Account on the BluStar Device's UI

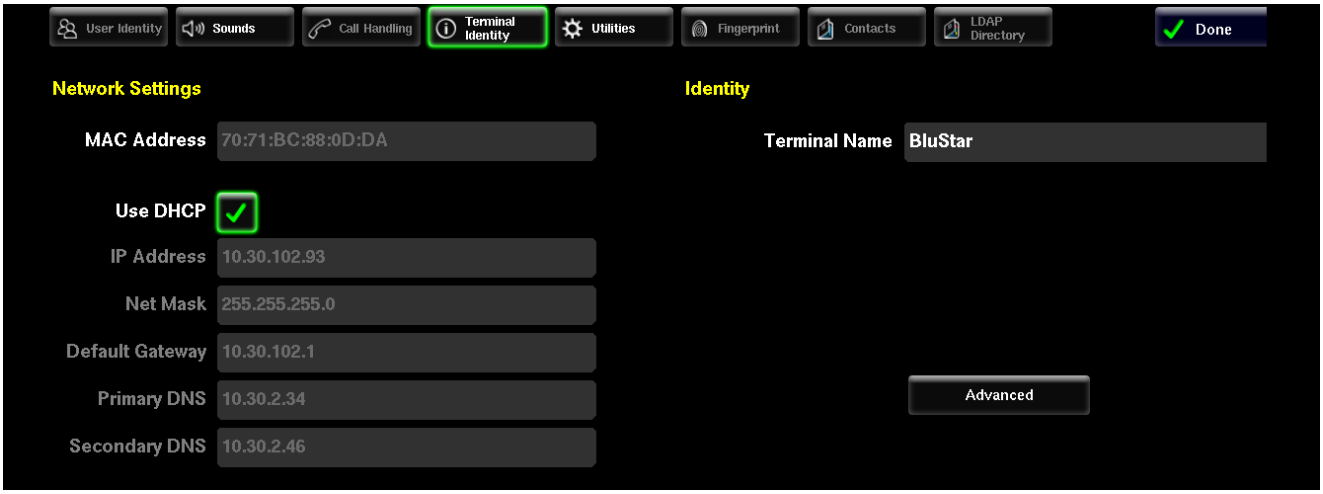
1. Log in to the BluStar device using the account you wish to configure as the autologin account.
2. Select the **App Menu** button
   OR
   the hot key (on the BluStar 8000i).
   The App Menu button is outlined in green, indicating that it is opened.
3. Select the **Tools** button.
4. Select the **User Identity** button.
5. Select **Autologin, upon restart, for this account and device**.
6. Select **Done**.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Autologin Setting on page A-54.

Terminal Identity

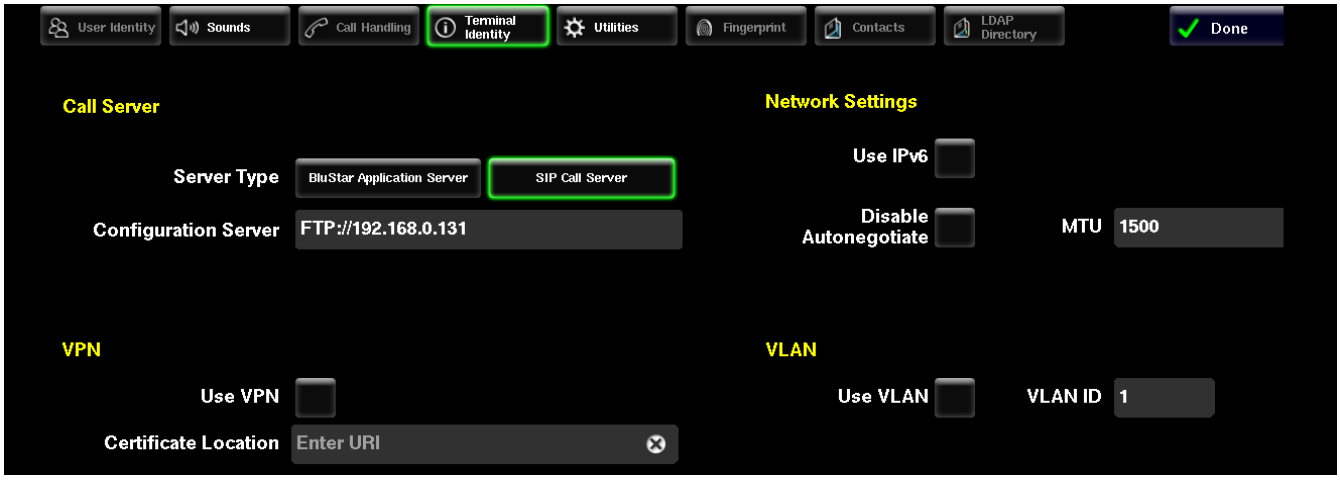
In the **Tools** menu on the BluStar device UI, you can specify the **Terminal Identity** connection settings used by the device to communicate with your network.



When a user is logged off of a BluStar device, you can enter information in the following fields on the main terminal identity screen:

Field	Description
Network Settings	
Use DHCP	The BluStar device is capable of querying a DHCP server. If DHCP is disabled, manually enter the configuration server's IP address. For more information, see DHCP on page 3-3.
IP Address	IP address of the BluStar device. To assign a static IP address, disable DHCP. For more information, see Configuring Network Settings Manually on page 3-7.
Net Mask	Subnet mask defines the IP address range local to the BluStar device. To assign a static subnet mask, disable DHCP. For more information, see Configuring Network Settings Manually on page 3-7.
Default Gateway	The IP address of the network's gateway or default router IP address. To assign a static Gateway IP address, disable DHCP. For more information, see Configuring Network Settings Manually on page 3-7.
Primary DNS	Primary domain name server IP address. For any of the IP address settings on the BluStar device a domain name value can be entered instead of an IP address. With the help of the domain name servers, the domain names for such parameters can then be resolved to their corresponding IP addresses. To assign static DNS addresses, disable DHCP. If a host name is configured on the BluStar device, you must also set a DNS. For more information, see Configuring Network Settings Manually on page 3-7.
Secondary DNS	A service that translates domain names into IP addresses. To assign static DNS addresses, disable DHCP. For more information, see Configuring Network Settings Manually on page 3-7.
Identity	
Terminal name	N/A in SIP Call Server mode.

Touching the **Advanced** button displays the advanced terminal identity options.



The advanced terminal identity screen allows you to configure the following settings:

Field	Description
Call Server	
Server Type	Specifies if the BluStar device is in BluStar Application Server mode or SIP Call Server mode.
Configuration Server	Specifies the BluStar device's configuration server's IP address. For more information, see Configuration Server Settings on page 2-10.
VPN	
Use VPN	Enables the client-side Virtual Private Network (VPN) connection for remote access to the SIP Call Server network.
Certificate Location	Specifies the VPN certificate location. For more information, see Virtual Private Network (VPN) on page 3-12.
Network Settings	
Use IPv6	Enables IP version 6 that will depreciate IP version 4.
Disable Autonegotiate	Auto-negotiate is when two connected devices choose common transmission parameters. By default, the BluStar device will auto-negotiate during transmission. In the auto-negotiation process, the connected devices share their speed and duplex capabilities and connect at the highest common denominator (HCD). Auto-negotiation can be used by devices that are capable of different transmission rates (such as 10Mbps/sec, 100Mbps/sec, or 1000Mbps/sec), different duplex modes (half duplex and full duplex), and/or different standards at the same speed. You can disable autonegotiate on the BluStar device. For more information, see Configuring LAN and PC Port Negotiation on page 3-8.
MTU	Displays the maximum size of packet you can send. If a packet is larger than 1500 it will send multiple packets up to 1500 each in size.
VLAN	
Use VLAN	Enables the Virtual Local Area Network (VLAN) feature. For more information, see Virtual Local Area Network (VLAN) on page 3-10.
VLAN ID	Specifies the VLAN ID that associates with the physical Ethernet Port 0. For more information, see Virtual Local Area Network (VLAN) on page 3-10.

Factory Defaults

You can set the BluStar 8000i or BluStar for Conference Room to its factory default setting on the BluStar device's UI. Factory default settings are the settings that reside on the device after it has left the factory. Factory default settings on the BluStar devices set factory defaults for all of the settings in the aastra.cfg, <model>.cfg, and <mac>.cfg files.

Note:

Resetting the device to factory default will not change the <user>.cfg.

To Reset to Factory Defaults:

1. Select the **App Menu** button.
2. Select **Tools** >**Utilities**.
3. Select the **Reset to Factory Defaults** button.
   The following message appears: "*Do you really want to log off and reset to factory defaults*?"
4. Select either **Reset** or **Cancel.**

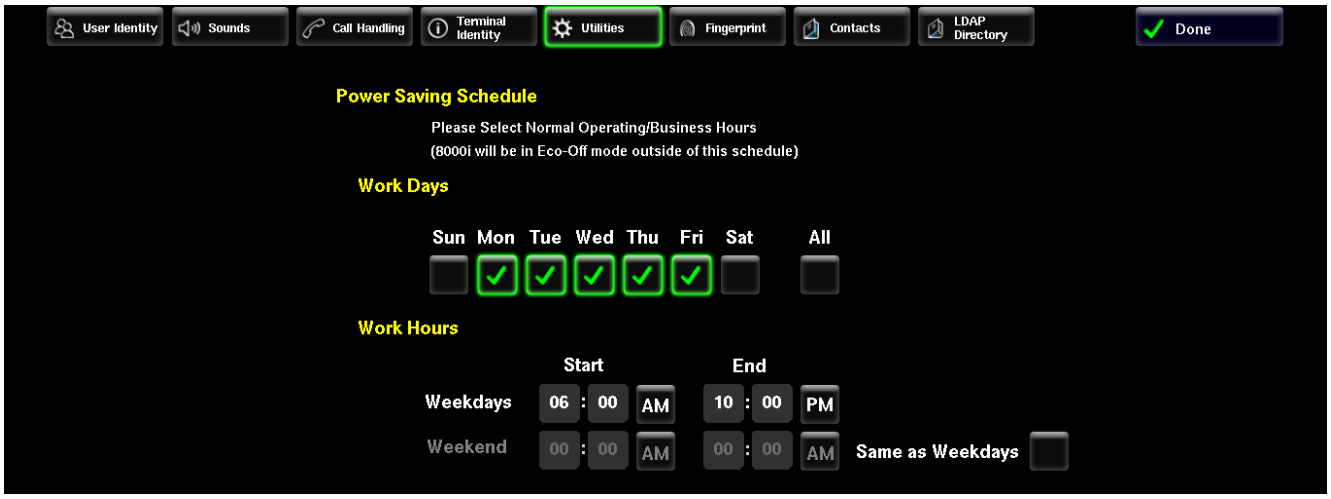
Power Saving Eco-Off Mode

The BluStar 8000i and BluStar for Conference Room integrate a power saving Eco-Off mode. Administrators can enable Eco-Off mode by defining the BluStar device user's normal operating work schedule. During the period of time outside of the specified work schedule, the BluStar device will automatically power down all extraneous hardware components and a screen saver will be initialized, thereby allowing for a reduction in overall energy consumption and in turn a decrease in operating costs.

Users can directly enable the Eco-Off power saving mode on their BluStar device by selecting the **Eco-Off** button located in the Applications and Telephone Connection Management area of the screen. The BluStar device can be "woken up" while in Eco-Off mode by pressing any key on the BluStar for Conference Room keyboard or by either touching the screen, pressing any hard key, lifting the handset, or (when not logged in) using the fingerprint reader on the BluStar 8000i.

Notes:

- If the BluStar device is "woken up" while in Eco-Off mode, the BluStar device will not return to Eco-Off mode until the next scheduled power saving period.
- If the BluStar device is in an active call or in use at the time Eco-Off mode is set to initialize, Eco-Off mode will be delayed until the BluStar device is idle.
- The BluStar device will automatically exit Eco-Off mode at the scheduled start of the normal operating/business hours if a power saving schedule has been configured and the user is logged in.
- Incoming calls will be ignored by the BluStar device if it is in Eco-Off mode. A busy tone will be played back to any callers and your status will be displayed to others as "Unavailable".



The power saving schedule can be configured directly on the BluStar device by navigating to the Power Saving Schedule screen in the Utilities menu of the Tools application. Administrators have the additional option of configuring the power saving schedule by defining the following parameters in the configuration files:

Notes:

- The value ranges for the "working hour [weekday/weekend] [start/end]" parameters are dependent on the time format of the respective BluStar device (i.e. 12-hour or 24-hour).
- If the BluStar device is set to the 24-hour format, the "working pm [weekday/weekend] [start/end]" parameters should not be defined in the configuration files.
- The term "weekday" for the Power Saving Schedule feature on the BluStar device refers to the days from Monday to Friday. The term "weekend" refers to Saturday and Sunday.

Parameter in Configuration Files	Description
user defined power savings schedule	Specifies whether or not users are allowed to configure the power saving schedule on their BluStar device. If enabled, users will be allowed to configure their own power saving schedule. Example: user defined power savings schedule: 0
working monday	Specifies whether or not Mondays are part of the BluStar device user's normal work week. Example: working monday: 1
working tuesday	Specifies whether or not Tuesdays are part of the BluStar device user's normal work week. Example: working tuesday: 1
working wednesday	Specifies whether or not Wednesdays are part of the BluStar device user's normal work week. Example: working wednesday: 1
working thursday	Specifies whether or not Thursdays are part of the BluStar device user's normal work week. Example: working thursday: 1
working friday	Specifies whether or not Fridays are part of the BluStar device user's normal work week. Example: working friday: 1
working saturday	Specifies whether or not Saturdays are part of the BluStar device user's normal work week. Example: working saturday: 0
working sunday	Specifies whether or not Sundays are part of the BluStar device user's normal work week. Example: working sunday: 0
working all days	Specifies whether or not the BluStar device user's normal work week consists of all they days of the week. Example: working all days: 0
working hour weekday start	Specifies the starting hour of the BluStar device user's weekday work schedule. Example: working hour weekday start: 9 **Notes:** • Ranges for this parameter are dependent on the time format of the respective BluStar device. • The term "weekday" refers to the days from Monday to Friday.

Parameter in Configuration Files	Description
working minute weekday start	Specifies the starting minute of the BluStar device user's weekday work schedule. Example: working minute weekday start: 15 **Note:** The term "weekday" refers to the days from Monday to Friday.
working pm weekday start	Specifies whether the BluStar device user's weekday work schedule start time defined in the "working hour weekday start" and "working minute weekday start" parameters is AM or PM. Example: working pm weekday start: 0 **Notes:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekday" refers to the days from Monday to Friday.
working hour weekday end	Specifies the ending hour of the BluStar device user's weekday work schedule. Example: working hour weekday end: 5 **Notes:** • Ranges for this parameter are dependent on the time format of the respective BluStar device. • The term "weekday" refers to the days from Monday to Friday.
working minute weekday end	Specifies the ending minute of the BluStar device user's weekday work schedule. Example: working minute weekday end: 30 **Note:** The term "weekday" refers to the days from Monday to Friday.
working pm weekday end	Specifies whether the BluStar device user's weekday work schedule end time defined in the "working hour weekday end" and "working minute weekday end" parameters is AM or PM. Example: working pm weekday end: 1 **Notes:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekday" refers to the days from Monday to Friday.
working hour weekend start	Specifies the starting hour of the BluStar device user's weekend work schedule. Example: working hour weekend start: 11 **Notes:** • Ranges for this parameter are dependent on the time format of the respective BluStar device. • The term "weekend" refers to Saturday and Sunday.
working minute weekend start	Specifies the starting minute of the BluStar device user's weekend work schedule. Example: working minute weekend start: 30 **Note:** The term "weekend" refers to Saturday and Sunday.
working pm weekend start	Specifies whether the BluStar device user's weekend work schedule start time defined in the "working hour weekend start" and "working minute weekend start" parameters is AM or PM. Example: working pm weekend start: 0 **Notes:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekend" refers to Saturday and Sunday.
working hour weekend end	Specifies the ending hour of the BluStar device user's weekend work schedule. Example: working hour weekend end: 3 **Notes:** • Ranges for this parameter are dependent on the time format of the respective BluStar device. • The term "weekend" refers to Saturday and Sunday.
working minute weekend end	Specifies the ending minute of the BluStar device user's weekend work schedule. Example: working minute weekend end: 30 **Note:** The term "weekend" refers to Saturday and Sunday.

Parameter in Configuration Files	Description
working pm weekend end	Specifies whether the BluStar device user's weekend work schedule end time defined in the "working hour weekend end" and "working minute weekend end" parameters is AM or PM. Example: working pm weekend end: 1 **Notes:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekend" refers to Saturday and Sunday.
weekend working same as weekdays	Specifies whether or not the BluStar device user's weekend work schedule is the same as his/her weekday work schedule. Example: weekend working same as weekdays: 0 **Note:** The term "weekday" for the Power Saving Schedule feature on the BluStar device refers to the days from Monday to Friday. The term "weekend" refers to Saturday and Sunday.

To Configure the Power Saving Schedule Using the Configuration Files:

Use the following procedure to configure the power saving schedule:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Power Saving Schedule Settings on page A-54.

To Configure the Power Saving Schedule on the BluStar Device UI:

1. Select the **App Menu** button.
2. Select **Tools** > **Utilities**.
3. Select the **Power Saving Schedule** button.
4. Under **Work Days**, select the buttons corresponding to the days of the week that you are normally at work.
   or
   Select the **All** button if your normal work week consists of all the days of the week.
5. Under **Work Hours**, enter the **Start** and **End** time of your weekday work schedule by selecting the hour (HH) and minute (MM) fields and using the keyboard. If your device is in 12-hour mode, select the **AM/PM** button to toggle between the two options.
6. Enter the **Start** and **End** time of the your weekend work schedule by selecting the hour (HH) and minute (MM) fields and using the keyboard. If your device is in 12-hour mode, select the **AM/PM** button to toggle between the two options.
   or
   Select the **Same as Weekdays** button if your weekend work schedule is the same as your weekday work schedule.

   Note:
   The term "weekday" for the Power Saving Schedule feature on the BluStar device refers to the days from Monday to Friday. The term "weekend" refers to Saturday and Sunday.
7. If you do not have to configure anything else on the screen, select **Done**.

To Directly Enable Eco-Off Mode:

1. Select the **Eco-Off** button located in the Applications and Telephone Connection Management area of the main screen.

The BluStar device will automatically power down all extraneous hardware components and a screen saver will be initialized.

To Wake Up the BluStar Device from Power Saving Mode:

1a. For the BluStar 8000i, touch any part of the screen.
or
Press any key on the BluStar 8000i.
or
Lift the handset.

Note:
If you are not logged in to your account, the fingerprint reader can also be used to wake up the BluStar 8000i from Eco-Off Mode .

1b. For the BluStar for Conference Room, press any key on the keyboard.

The following progress bar will be displayed on screen:

After powering up, the BluStar device will be ready for normal operation.

User Settings

User Config File Upload

You can specify the number of seconds until user settings or contacts will be re-uploaded to the server IF there has been a change using the "**user config upload**" parameter.

Name and Passwords

The user name and password to retrieve the <user>.cfg and directory files (global.csv and <user>.csv) are configured on the configuration server. The SIP user name and password are configured on the SIP Call Server that the device will login to.

Terminal Security Settings

Administrators can set terminal security settings using the parameters listed below.

Require Settings Password

You can specify if a password should be required to edit the terminal identity using the "**require settings password**" parameter.

Settings Password

If the "**require settings password**" parameter is enabled, you can specify the required password by using the "**settings password**" parameter.

Disable Dialing When Logged Off

You can disable dialing when no user is logged into the BluStar device using the "**logoff disable dial**" parameter. Disabling dialing will cause the device to not display the dial pad.

Auto Answer

You can specify whether or not to allow users to change auto answer settings by using the "**auto answer**" configuration parameter. Additionally, this parameter must be enabled for the "**sip allow auto answer**" parameter (i.e. to enable/disable auto-answering of incoming intercom calls) to have any effect (see Do Not Disturb Settings on page 4-16).

To Configure Auto Answer on the BluStar Device UI:

1. Select the **App Menu** button.
2. Select **Tools** > **Call Handling**.
3. Select the **Auto Answer** button.
4. Select either:
   - **Instantly**
   - **After x Rings (i.e. x = 1-10 rings)**

   Notes:
   - If you select "Off" you will not be able to configure auto answer for "If in Call or Conference".
   - The option "If in Call with Non BluStar Device" is not available in SIP Call Server mode.
   - If the "**sip allow auto answer**" parameter is enabled, incoming intercom calls will always be answered instantly even if the auto answer setting is configured for "After x Rings".
5. Select the **If in Call or Conference** button.
6. Select either:
   - **Decline New Call and Remain in Old Call**
   - **Conference New Call into Old Call**
   - **Answer New Call and Disconnect Old Call**
   - **Answer New Call and Put Old Call on Hold**
7. If you do not have to configure anything else on the screen, select **Done**. When auto answer is configured, you will see a symbol on the top of the Home screen.

Force Reboot Time

You can reboot a BluStar device at a specified time using the "**auto reboot**" parameter. The format for this parameter is **yyyy-mm-dd hh:mm:ss** (for ASAP use current date and time).

Screen Lock With Inactivity

You can set the screen to lock after a specified period of inactivity using the "**screen lock time**" parameter. Once a BluStar device is locked, the system requires the currently logged in user's password to be re-entered before the device can be used again. Administrators and users can also manually lock/unlock a device using the BluStar device's UI (see Lock Screen on page 1-25).

To Configure Terminal Security Settings:

Use the following procedure to configure terminal security settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Terminal Security Settings on page A-61.

Screen Settings

Administrators can modify the screen dimming and screen saver settings using the parameters listed below.

Screen Dimming

The screen first dim time can be disabled or set to a specified number of seconds, minutes, hours, or days (ranging from 1-10000) using the "**screen 1st dim time**" parameter. The screen partially dims after this set value.

The screen second dim time can be disabled or set to a specified number of seconds, minutes, hours, or days (ranging from 1-10000) using the "**screen 2nd dim time**" parameter. The screen further dims after this set value.

Screen Saver

The screen saver time can be disabled or set to a specified number of seconds, minutes, hours, or days (ranging from 1-10000) using the "**screen save time**" parameter.

Show Cursor

You can configure if the mouse cursor will display on the BluStar device using the "**show cursor**" parameter.

To Configure Screen Settings:

Use the following procedure to configure screen settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Screen Settings on page A-63.

Locale Settings

The BluStar 8000i and BluStar for Conference Room supports several different languages, time zones, and date and time formats. When you specify the language to use, all of the screens display in that language. Administrators can modify the language, time zone, and date and time format settings using the parameters listed below.

Language

You can specify the language to be used on the BluStar device UI using the "**language name**" parameter. The UI is available in the following languages:

- English (default)
- Dutch
- French
- German
- Italian
- Japanese
- Simplified Chinese
- Spanish

Time Zone

You can specify the time zone using the "**time zone name**" parameter. The default time zone is "us-eastern".

Date and Time Format

You can specify the date and time formats using the "**date format**" and "**time format**" parameters. The default date format is "WWW MMM DD", while the default time format is the 12 hr format.

Notes:

- These parameters affect how the date and time are displayed on the home screen, in all the applications, and in the call logs.
- If a date format is selected that contains the year, the home screen will not display the year due to space limitations.

To Configure Locale Settings:

Use the following procedure to configure locale settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Locale Settings on page A-65.

Audio/Video Settings

Administrators can configure various audio and video settings using the parameters listed below.

Maximum Video Bandwidth Limit

You can set the maximum video bandwidth limit using the "**video max kbitrate**" parameter. This parameter limits the video bandwidth for the device to the selected value (either 5000, 3000, 2500, 1500, 768, 384, or 128 kilobits per second).

Maximum Audio Bandwidth Limit

You can set the maximum audio bandwidth limit using the "**audio max kbitrate**" parameter. This parameter limits the audio bandwidth limit for the device to the selected value (either 64, 32, 24, or 16 kilobits per second).

Maximum Video Data Transmit and Receive Rates for BluStar 8000i and Non-BluStar 8000i Devices

Asymmetric video data rate support is available allowing administrators and users the ability to independently configure the maximum video data transmit and receive rates for BluStar 8000i (and BluStar for Conference Room) and non-BluStar 8000i (and non-BluStar for Conference Room) devices. You can set the maximum data transmit and receive rates using the "**max 8000i h264 tx rate**", "**max 8000i h264 rx rate**", "**max h264 tx rate**", and "**max h264 rx rate**" parameters. You can also enable or disable the ability to configure these settings in the BluStar UI (**Tools** menu > **Call Handling** screen) by utilizing the "**user defined video rate**" parameter.

To Configure Audio/Video Settings:

Use the following procedure to configure audio and video settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Audio/Video Settings on page A-68.

Call Forward Settings

Call forward (CFWD) allows incoming calls to be forwarded to another destination. The BluStar 8000i and BluStar for Conference Room sends the SIP message to the SIP proxy, which then forwards the call to the assigned destination. An administrator can configure the "**call forward disabled**" parameter to either enable or disable the ability to configure CFWD on the BluStar device UI. If this parameter is set to "0", a user and administrator can configure CFWD on the BluStar device UI (**Tools** menu > **Call Handling** screen). If this parameter is set to "1", all CFWD options are removed from the BluStar device UI, preventing the ability to configure CFWD.

To Enable or Disable Call Forwarding:

Use the following procedure to configure call forwarding:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Call Forward Settings on page A-70.

Users can configure call forward settings on their device UI. Administrators can also configure call forwarding settings in the <user>.cfg file using the following parameters:

- sip forward all state
- sip forward all number
- sip forward busy state
- sip forward busy number
- sip forward no answer state
- sip forward no answer number
- sip ring number

To Configure Call Forward Settings Using the Configuration Files:

Use the following procedure to configure call forwarding:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Call Forward Settings on page A-70.

To Configure Call Forward Settings on the BluStar Device UI:

1. Select the **Tools** app then **Call Handling**.
2. Under call forward, select the **No Answer** field to enter in the forwarding number using the keyboard.
3. Select the **After 1 Ring** button to select how many rings you want to wait until the device forwards the call.
4. Select the **All** field to enter in the forwarding SIP URL or number using the keyboard.
5. Select the **Busy** field to enter in the forwarding SIP URL or number using the keyboard.
6. If you do not have to configure anything else on the screen, select **Done**.
7. In the telephone feature controls, select the **Forward** button.
   The button is outlined in green, indicating call forward is ON. Additionally, you will see a symbol on the top of the Home screen.

Do Not Disturb Settings

Administrators have the option of disabling the DND function on respective BluStar devices. By defining the "**dnd ui**" parameter as "**0**" in the configuration files, the DND button will be grayed out on any affected devices thereby restricting users from enabling the DND feature.

If the parameter is defined as "**1**" (default), DND can be enabled or disabled by users at their discretion by selecting the DND button on their respective devices.

To Enable or Disable DND:

Use the following procedure to configure DND:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Do Not Disturb Settings on page A-73.

Call Waiting Settings

The call waiting feature notifies a user on an active call of a new incoming call. Administrators have the option to disable the call waiting feature using the "**call waiting**" parameter, so that new incoming calls are automatically rejected by the BluStar device with a 486 Busy Here message.

If you disable call waiting on the BluStar device and the user is on a call, any additional incoming calls will receive a busy message unless the "Call Forward Busy" option is configured. If this is the case, the BluStar device will forward the call accordingly as per the rules configured.

Administrators can enable/disable call waiting using the configuration files. The parameter is enabled by default.

To Enable or Disable Call Waiting:

Use the following procedure to configure Call Waiting:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Call Waiting Settings on page A-73.

Incoming Intercom Call Auto-Answer Settings

The intercom auto-answer feature allows you to enable or disable automatic answering for an intercom call. In conjunction with the general "**auto answer**" parameter enabled (see Auto Answer on page 4-12), when the new "**sip allow auto answer**" parameter is enabled as well, the BluStar device will recognize an incoming intercom call by the information relayed in the "Call-Info" header of the SIP INVITE. It will then place any active calls/conferences on hold and automatically/instantly answer the intercom call.

BluStar devices recognize if an incoming call is an intercom auto-answer call if the call's SIP INVITE includes a "Call-Info" header containing "answer-after=0" (e.g. Call-Info: <URI>;answer-after=0).

Notes:

- Both the "**auto answer**" and "**sip allow auto answer**" parameters must be enabled to use the incoming intercom call auto-answer feature.
- Users can change the intercom call auto-answer behavior when in active calls/conferences by configuring auto-answer call handling settings on their BluStar device (see To Configure Auto Answer on the BluStar Device UI: on page 4-12).

To Configure the Incoming Intercom Call Auto-Answer Feature Using the Configuration Files:

Use the following procedure to configure the incoming intercom call auto-answer feature:

Configuration Files

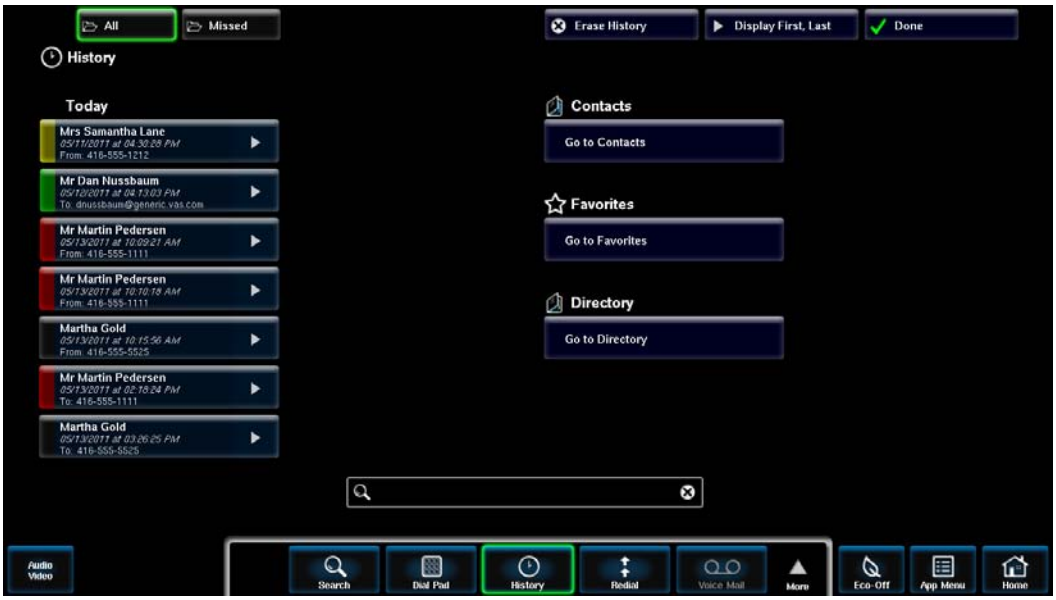
For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Incoming Intercom Call Auto-Answer Settings on page A-74.

History

The history screen displays information about each call that you have either received, missed, or dialed. The BluStar 8000i and BluStar for Conference Room log the name and number of the caller, and the date and time of the call. Call history is divided into two folders at the top of the screen: **All** (calls) and **Missed** (calls). All calls includes calls that are received and dialed. By default, the contacts in the **All** (calls) or **Missed** (calls) folders are sorted by date. You can also sort the contacts by the following:

- First Name (default)
- Last Name
- Company then First Name
- Company then Last Name

Users can also type in the name of the contact (or company name, if applicable) in the search text field, call a contact from this screen, and erase contacts from their call history.



You can enable and disable the history feature using the configuration files. When disabled, the History button will be greyed out and there is no missed calls indicator. When enabled, you can view, scroll, and delete contacts. You can also retrieve missed calls.

To Sort Contacts:

1. Select the **History** button.
2. Select the arrow on the **Sort by First Name** button at the top of the screen.
3. Select either:
   - **Sort by First Name**
   - **Sort by Last Name**
   - **Sort by Company then First Name**
   - **Sort by Company then Last Name**

To Erase Call History:

1. Select the **History** button.
2. Select the **Erase History** button.
   The following message appears: *Are you sure you want to erase all call history entries?*
3. Select **Erase Call History** or **Cancel**.

Enabling/Disabling Call History

You can enable and disable user access to the call history on the BluStar device using the "**callers list disabled**" parameter in the configuration files.

Valid values for this parameter are '0' (enabled) and '1' (disabled). If this parameter is set to '0', the call history can be accessed by all users. If this parameter is set to '1', the device does not save any caller information to the call history.

Use the following procedure to enable/disable the call history on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Call History Settings on page A-33.

Missed Calls Indicator

The History button will show a missed calls indicator that increments the number of missed calls.

Additionally, the following missed calls indicator will be displayed on screen when the BluStar device is in screensaving or Eco-Off mode.

You can enable and disable the missed calls indicator feature using the configuration files. When disabled, the missed calls indicator does not increment as calls come into the BluStar device.

When enabled, the number of calls that have not been answered increment on the missed calls indicator. As the number of unanswered calls increment, the phone numbers associated with the calls are stored in the call history. The user can access the call history and clear the calls from the list. Once the user accesses the history screen, the missed calls indicator on the history button is cleared.

Note:
You must have the call history button enabled in order to view the missed calls indicator.

To Retrieve Missed Calls:

1. Select the **History** button.
2. Select the **Missed** folder.
3. Select a contact button to call them.
   OR
   Select the arrow on a contact button.
4. Select **+ Add to Contacts** or **Add to Favorites**.
5. Select the **History** button again to de-select it and close the search screen.

Enabling/Disabling Missed Calls Indicator

You can enable (turn on) and disable (turn off) the missed calls indicator on the BluStar device using the "**missed calls indicator disabled**" parameter in the configuration files. Valid values for this parameter are '0' (enabled) and '1' (disabled). If this parameter is set to '0', the indicator increments as unanswered calls come into the device. If set to '1', the indicator does not increment the unanswered calls.

Use the following procedure to enable/disable the missed calls indicator on the BluStar device.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Missed Calls Indicator Settings on page A-33.

Directory

The BluStar 8000i and BluStar for Conference Room have a directory feature that allows you to store two directories (global and user) in the <user>.cfg file. The **global directory** will populate the directory on the BluStar device UI. The **user directory** will populate the user's contacts (address book). Administrators can also configure LDAP directories that will appear on the user's device directory screen (see Basic LDAP Settings on page 4-28).

Notes:

- If enabled, users can choose to have the global directory and the LDAP directory on their device on the directory screen, or if they select "only use LDAP directory" on the LDAP directory screen, they wont be able to access the global directory set up by the system administrator (see User Defined LDAP on page 4-29 for more information).
- Users can also add their Microsoft Exchange contacts to their BluStar device address book. If users import their Microsoft Exchange contacts, they will not have access to the user directory (see Basic LDAP Settings on page 4-28 for more information).

You can perform the following pertaining to the directory:

- You can enable and disable access to the directory list using the <user>.cfg file. When disabled, the directory list does not display on the BluStar device UI, and the **Go to Directory** button on the UI will be red.
- If the directory list is enabled, you can view, add, change, and delete entries to/from the directory using the BluStar device UI. You can also directly dial a number from the directory.
- You can download the directory list to your PC. BluStar devices store the *directorylist.csv* file to your PC in comma-separated value (CSV) format.
- You can use any spreadsheet application to open the file for viewing. The following is an example of a directory list in a spreadsheet application.

30401.csv

	A	B	C	D	E
1	John	41373	2	Cell	Private
2	Tim	41376	1	Office	Private
3	Carol	4443245	1	Home	Public
4	Tom	41356	3	Pager	Private
5					

The file displays the name, phone number(s), and line number(s) for each directory entry.

Note:

The directory .csv files must be UTF-8 encoded in order for the BluStar device to properly manage any accented characters within the entries.

Configuring the Directory List

You can configure the global directory list on the BluStar device using the "**directory 1**" parameter, and the user directory using the "**directory 2**" parameter. You can use these parameters in the following ways:

- to download no directory
- to download a directory from the original configuration server
- to download a directory from another specified server

To download a specific file, the string value must have a filename at the end of the string. For example, directory 1: ftp://10.30.102.158/path/user.csv

To Configure the Global and User Directories:

Use the following procedure to configure global and user directories:

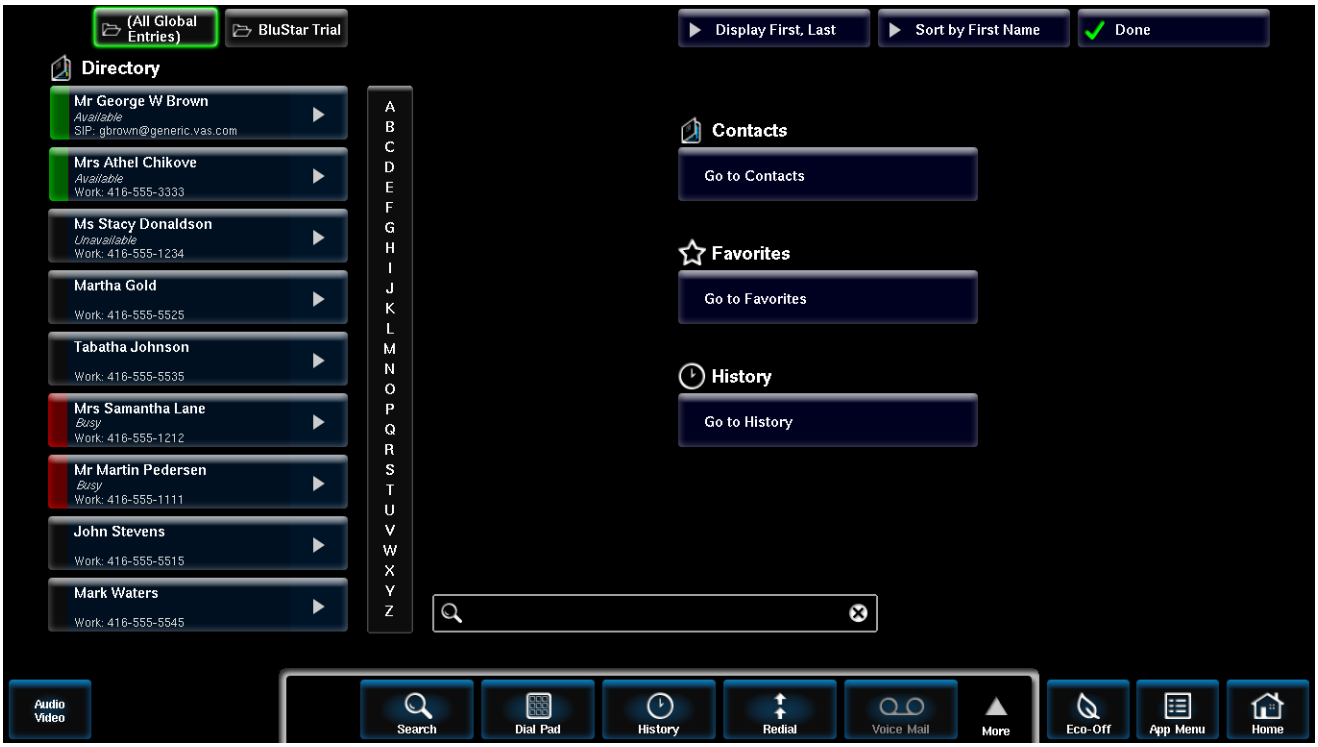
Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Directory Settings on page A-31.

Using the Directory on the BluStar Device UI

On the directory screen, you will see all global entries, LDAP directories, and links to your contacts, favorites (including monitored contacts on your BLF list), and call history. When the directory is sorted by default or by first or last name, you can scroll through contacts using a A-Z menu. Contacts can also be sorted by the following:

- First Name (default)
- Last Name
- Company then First Name
- Company then Last Name



Users can also type in the name of the contact they are looking for (or company, if applicable) in the search text field.

To Open the Directory:

1. In the telephone feature controls, select the **Directory** button.
   The button is outlined in green, indicating that the directory is open.

To Close the Directory:

1. In the telephone feature controls, select the **Directory** button to de-select it.
   OR
   On the directory screen, select **Done**.
   The button is not outlined in green, indicating that the directory is closed.

To Sort the Directory:

1. In the telephone feature controls, select the **Directory** button.
2. Select the arrow on the **Sort by First Name** button at the top of the screen.
3. Select either:
   - **Sort by First Name**
   - **Sort by Last Name**
   - **Sort by Company then First Name**
   - **Sort by Company then Last Name**

Using Contacts (Address Book) on the BluStar Device UI

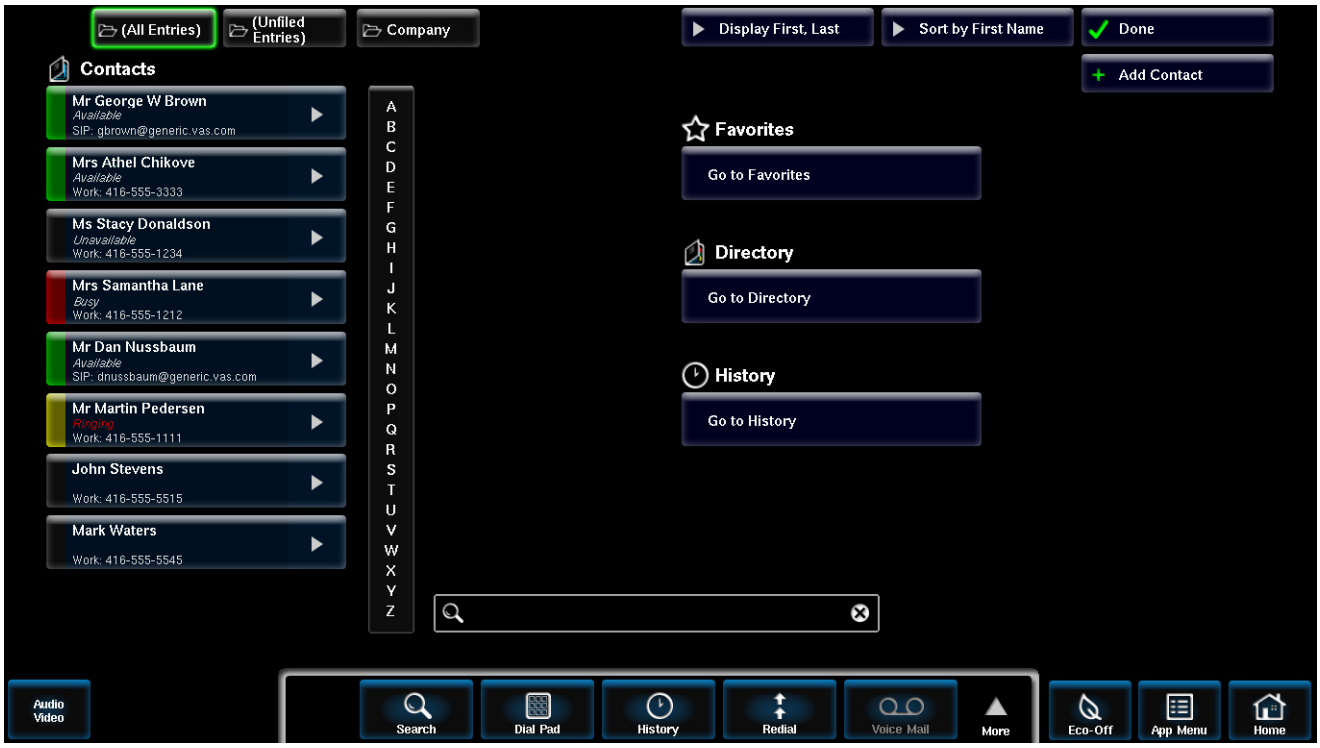
Administrators can populate the user's contacts with the user directory ("**directory 2**") parameter, or you can enable users to import their Microsoft Exchange personal contacts. On the contacts screen on the BluStar device UI, you will see your address book that contains contact buttons, contact folders, an alphabetic menu, a search field, and links to your favorites, directory, and call history. When contacts are sorted by default or by first or last name, you can scroll through them using a A-Z menu.

From the contacts screen, you can manage your address book by doing any of the following:

- search, add, edit, or delete a contact
- select a contact from favorites, directory, and or history menus
- sort contacts
- add a contact to favorites

Contacts are represented as buttons on the screen. A contact button contains the following:

- name of contact
- status (available, busy, ringing, unavailable, see Busy Lamp Field (BLF) on page 4-42 for more information)
- SIP address
- arrow to open the contact screen where you can do the following:
  - see the details of the contact
  - change the color of the button
  - dial the contact
- add or delete the contact from your contacts or favorites



To Open the Contacts Screen:

1. In the telephone feature controls, select the **Contacts** button.
   The button is outlined in green, indicating that the contacts screen is open.

To Close the Contacts Screen:

1. In the telephone feature controls, select the **Contacts** button to de-select it.
   OR
   On the contacts screen, select **Done**.
   The button is not outlined in green, indicating that the contacts screen is closed.

Searching for a Contact

You can search for contacts by going to any of the following:

- Your contacts list (all entries or unfilled entries)
- Favorites
- Directory
- History (call history)

To Search for a Contact:

1. In the telephone feature controls, select the **Contacts** button.
2. Select either (All Entries), (Unfiled Entries), or a created folder (e.g. Sales).
3. Select the **Search** text field and type in the contact search details.
   Note:
   Searches can be conducted by first name, last name, or company name.

4. Select **Search** on the keyboard.
   The search results appear under favorites, directory, and history.
5. Select a button with search results.

6. Select the arrow on a contact button.
7. Select **+ Add to Contacts**.
8. Select **Done**.

Configuring the Contact Dynamic Search Threshold

BluStar devices implement a dynamic contact search feature whereby contacts are listed and updated automatically on screen depending on the letters that are typed into the search text field. By default, the dynamic contact search feature is limited to 5000 records. If an LDAP or Exchange directory holds more records than the configured value, users will need to manually touch the **Search** button in order to trigger the contact search.

To Configure the Contact Dynamic Search Threshold:

Use the following procedure to configure the contact dynamic search threshold:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Directory Settings on page A-31.

Adding a Contact

You can add a contact from the contacts screen by touching any of the following buttons:

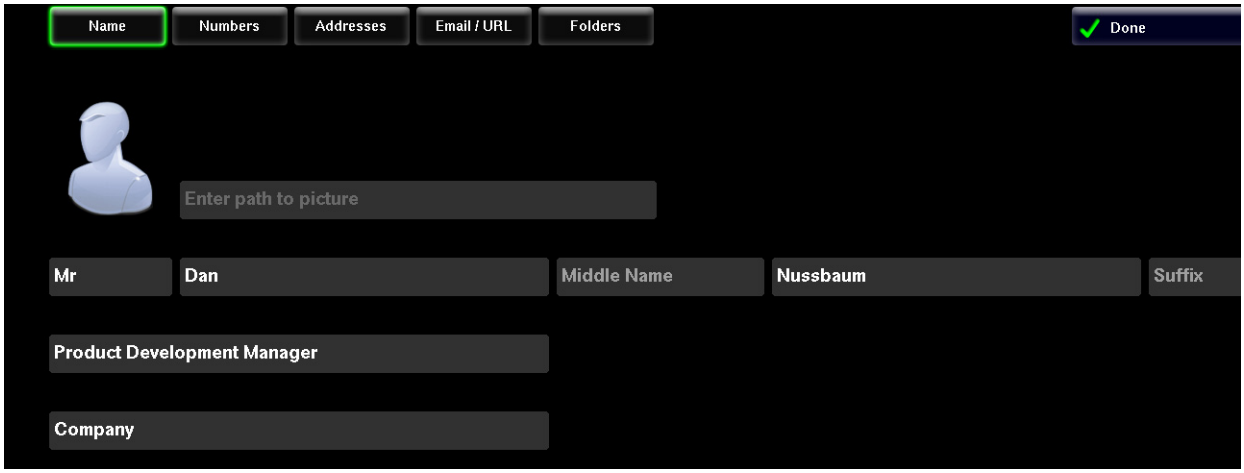
- + Add to Contacts
- Go to Favorites
- Go to Directory
- Go to History

You can also import contacts from your Microsoft Exchange personal contacts (see Microsoft Exchange Contacts on page 4-34)

To Add a New Contact:

1. In the telephone feature controls, select the **Contacts** button.
2. Select the **+ Add Contact** button.

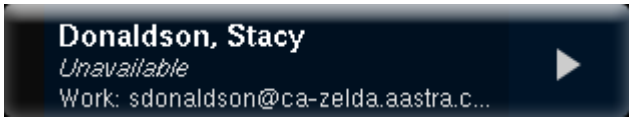
3. Enter in the details under the Name, Numbers, Addresses, Email/URL, and Folders buttons.



4. Select **Done**.

To Add a Contact from Favorites:

1. In the telephone feature controls, select the **Contacts** button.
2. Select the **Go to Favorites** button.
3. Select the arrow on the contacts button.



4. Select the **+ Add Contact** button.
5. Select **Done**.

To Add a Contact from Directory:

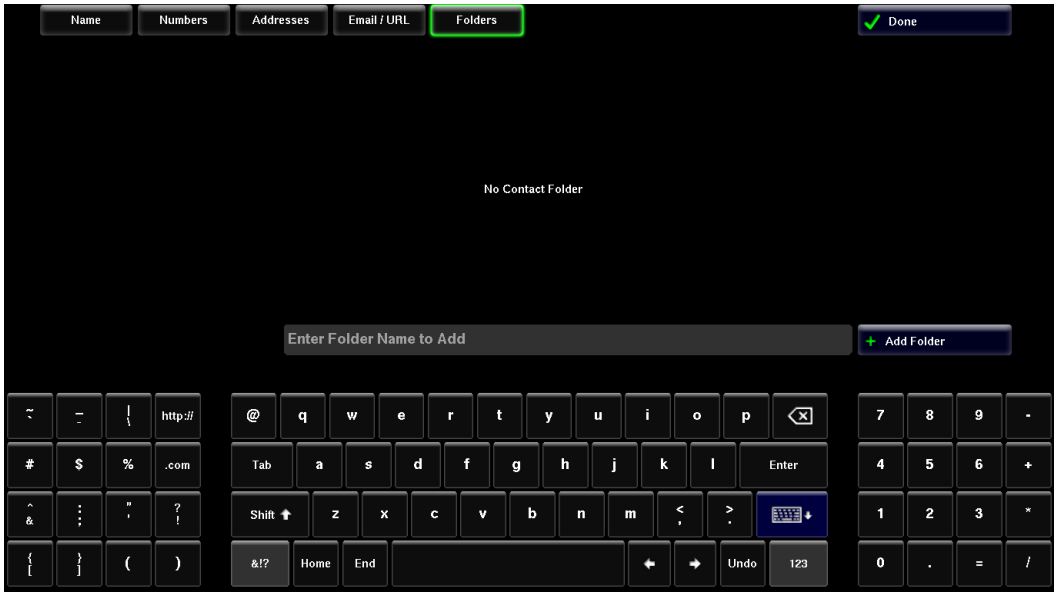
1. In the telephone feature controls, select the **Contacts** button.
2. Select the **Go to Directory** button.
3. Select the arrow on the contacts button.
4. Select the **+ Add Contact** button.
5. Select **Done**.

To Add a Contact from History:

1. In the telephone feature controls, select the **Contacts** button.
2. Select the **Go to History** button.
3. Select the arrow on the contacts button.
4. Select the **+ Add Contact** button.
5. Select **Done**.

To Add a Contact Folder:

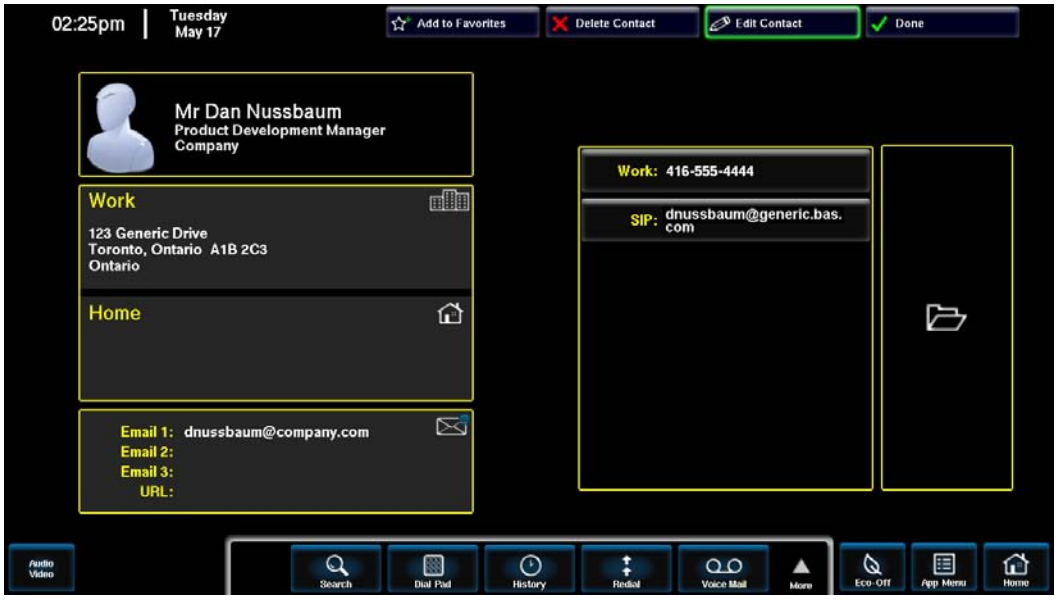
1. In the telephone feature controls, select the **Contacts** button.
2. Select the **+ Add Contact** button.
3. Select the **Folders** button.



4. Select the "Enter Folder Name to Add" text field and type in a new folder name.
5. Select the **+ Add Folder** button.
   The new folder will appear on the screen.

Editing a Contact

Users can edit a contact's name, address(es), phone number(s), organizational affiliation(s), email/web address(es), and the address book folders where the contact will appear.

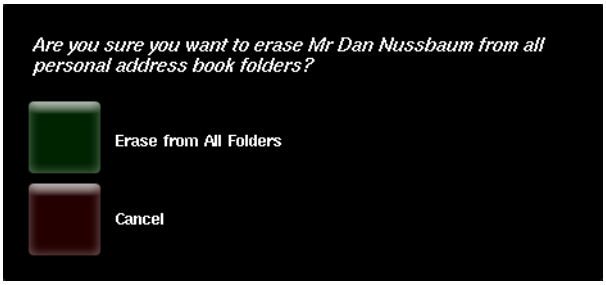


To Edit a Contact:

1. In the telephone feature controls, select the **Contacts** button.
2. Select the arrow on a contact button to open up the contact's information screen.
3. Select the **Edit Contact** button.
   All boxes are now outlined in yellow.
4. Select a box that you want to edit (e.g. Work).
5. Edit the information.
   Note:
   Do not include the special character "|" in any string that is to be displayed on the BluStar device.
6. Select **Done**.

Deleting a Contact

Users can delete a contact from all folders.



To Delete a Contact:

1. In the telephone feature controls, select the **Contacts** button.
2. Select the arrow on a contact button to open up the contact's information screen.
3. Select the **x Delete Contact** button.
   You will see the following message: *Are you sure you want to erase Contact from all personal address book folders?*
   Note:
   If the contact was added as a favorite, the message will also state, "*Favorite attached to this contact will also be deleted.*" Deleting a contact that has been added as a favorite will automatically delete the corresponding entry in the Favorites menu.
4. Select **Erase from All Folders**.
5. Select **Done**.

Sorting Contact

For each folder you can sort contacts by the following:

- First Name (default)
- Last Name
- Company, then First Name
- Company, then Last Name

To Sort Contacts:

1. In the telephone feature controls, select the **Contacts** button.
2. Select a folder button to highlight it.
3. Select the **Sort by First Name** button.
4. Select the desired sort method.
5. If you do not have to configure anything else on the screen, select **Done**.

Basic LDAP Settings

The BluStar 8000i and BluStar for Conference Room are able to use a Lightweight Directory Access Protocol (LDAP) server for reading directories over an IP network. Administrators can configure LDAP settings using the parameters listed below. If enabled by an Administrator, users can configure their own LDAP settings through their BluStar device. Users can also configure whether to display both the global and LDAP directories on their BluStar device or just the LDAP directory.

LDAP Name

You can specify the name of the LDAP directory using the "**ldap name**" parameter. The name is the label that will be displayed on the directory screen to identify the content, and it is usually the company name or "corporate".

LDAP Server

You can specify the IP or hostname of the LDAP server using the "**ldap server**" parameter. This will typically be the organization's main LDAP server, which contains the organization's main directory (global address book). Users can add additional LDAP servers as desired. This parameter handles multiple values, however the format is the following:

username:password@ldapserver:port

Where:

- username for authentication (optional, if not provided anonymous connection will be used)
- password for authentication (optional)
- ldapserver is the IP address or name of the LDAP server (mandatory)
- port is the LDAP interface port (optional, default is 389)

Example 1: ldap server: ldap.acme.com (no authentication and using default port 389)

Example 2: ldap server: user:password@ldap.acme.com:3268 (authentication and using port 3268)

LDAP Base DN

You can specify the LDAP server base Distinguished Name (DN) or the description of the top level of the directory tree using the "**ldap base dn**" parameter. Usually if a company domain is company.com, the base DN must be entered under the form "dc=company, dc=com".

For example, ldap base dn: dc=acme, dc=com for acme.com.

User Defined LDAP

The LDAP directory has two sets of settings: Server and User. Server settings are set by the administrator using the parameters above. User settings are configured by the user in the tools menu on the BluStar device UI, and will be stored in the <user.cfg> file.

Note:

User settings override the server settings.

You can allow or disallow the user to edit his or her own LDAP directory configuration that will override the configuration coming from the configuration server using the "**enable user defined ldap**" parameter.

To Configure LDAP Settings:

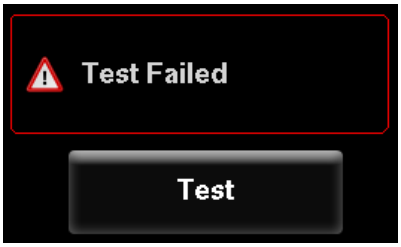
Use the following procedure to configure LDAP settings:

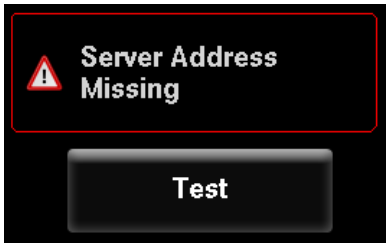
Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Basic LDAP Settings on page A-33.

To Configure the LDAP Directory on the BluStar Device UI:

1. Select the **App Menu** button, **Tools**, then the **LDAP Directory** button.
2. Select the **Override Server Configuration** button.
   This allows the user LDAP settings to override the LDAP server settings.
3. Enter the **LDAP Directory Name.** For example, “acme”.
   This name will appear as a folder on the directory screen.
4. Enter the **LDAP Server** name or IP address. For example, “ldap.company.com”.
5. (Optional) Enter the **LDAP Port** number. If no port number is entered, the default “389” port will be used.
6. Enter the **LDAP Base DN.** For example, “dc=acme, dc=com”.
   The base DN is the initial filter for every LDAP request.
7. Select **Use Login Credentials** if you want to connect to the LDAP server using the BluStar device user name and password.
   OR keep this option unselected and manually enter in a **User Name** and **Password**.
   Note:
   If LDAP authentication is anonymous, the user name and password fields can be left empty.
8. Select **Only Use LDAP Directory** if you do not want to use the global directory set up by the system administrator.
9. Select the test button to test the user settings configuration.
   If the configuration is successful, there will be a green check mark above the test button.
   If the test failed you will see an error message similar to the ones below.





If you see an error message, go back and re-enter the fields with the correct information.

Advanced LDAP Settings (optional)

When configuring an LDAP directory the option is available to customize the directory using the advanced parameters listed below. These advanced parameters are available for both active and non-active directories unless otherwise stated.

Note:

Advanced LDAP settings are optional and are not required for configuring the BluStar device to use a LDAP server for reading directories over an IP network.

Parameters in Configuration Files	Description
ldap name title attribute list	Specifies the LDAP name title (e.g. Mr.) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap name title attribute list: title, gender
ldap first name attribute list	Specifies the LDAP first name (e.g. John) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap first name attribute list: fname, uname
ldap last name attribute list	Specifies the LDAP last name (e.g. Doe) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap last name attribute list: name, lname
ldap middle name attribute list	Specifies the LDAP middle name (e.g. Allen) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap middle name attribute list: mname, initial
ldap name suffix attribute	Specifies the LDAP name suffix (e.g. Ph.D) for the attribute list. If this parameter contains more than one value, only the first matching value will be picked in the record. For example, ldap name suffix attribute: suffix
ldap company attribute list	Specifies the LDAP company name (e.g. Aastra) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap company attribute list: organization, bname
ldap job title attribute list	Specifies the LDAP job title (e.g. Vice President) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap job title attribute list: jtitle, title
ldap business street attribute list	Specifies the LDAP business street (e.g. Snow Blvd.) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business street attribute list: waddress, baddress
ldap business city attribute list	Specifies the LDAP business city (e.g. Concord) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business city attribute list: wcity, bcity
ldap business state attribute list	Specifies the LDAP business state (e.g. Ontario) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business state attribute list: wstate, bstate
ldap business postal code attribute list	Specifies the LDAP business postal code (e.g. L4K 4N9) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business postal code attribute list: bcode, wcode
ldap business country attribute list	Specifies the LDAP business country (e.g. Canada) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business country attribute list: bcountry, wcountry
ldap home street attribute list	Specifies the LDAP home street (e.g. Internet Blvd.) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap home street attribute list: hstreet, pstreet
ldap home city attribute list	Specifies the LDAP home city (e.g. Frisco) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap home city attribute list: hcity, pcity
ldap home state attribute list	Specifies the LDAP home state (e.g. Texas) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap home state attribute list: hstate, pstate

Parameters in Configuration Files	Description
ldap home postal code attribute list	Specifies the LDAP home postal code (e.g. 75034) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap home postal code attribute list: hcode, pcode
ldap home country attribute list	Specifies the LDAP home country (e.g. U.S.A) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap home country attribute list: hcountry, pcountry
ldap business phone 1 attribute list	Specifies the LDAP business phone 1 (e.g. 1-905-760-4200) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business phone 1 attribute list: wphone1, bphone1
ldap business phone 2 attribute list	Specifies the LDAP business phone 2 (e.g. 1-905-760-4201) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business phone 2 attribute list: wphone2, bphone2
ldap home phone 1 attribute list	Specifies the LDAP home phone 1 (e.g. 1-416-468-3266) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap home phone 1 attribute list: hphone1, pphone1
ldap home phone 2 attribute list	Specifies the LDAP home phone 2 (e.g. 1-416-468-3267) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap home phone 2 attribute list: hphone2, pphone2
ldap mobile phone attribute list	Specifies the LDAP mobile phone (e.g. 1-416-468-3268) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap mobile phone attribute list: cell, mobile
ldap other phone attribute list	Specifies the LDAP other phone (e.g. 1-416-468-3269) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap other phone attribute list: otherphone, mphone
ldap business fax attribute list	Specifies the LDAP business fax (e.g. 1-905-760-4233) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap business fax attribute list: fax, bfax
ldap email 1 attribute list	Specifies the LDAP email 1 (e.g. john.doe@aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap email 1 attribute list: email1, mail1
ldap email 2 attribute list	Specifies the LDAP email 2(e.g. john.d@aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap email 2 attribute list: email2, mail2
ldap email 3 attribute list	Specifies the LDAP email 3 (e.g. j.doe@aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap email 3 attribute list: email3, mail3
ldap web address attribute list	Specifies the LDAP web address (e.g. www.aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record. For example, ldap web address attribute list: web, url
ldap cn attribute	Used when both the first and last name of a record are empty. For example, ldap cn attribute: display
ldap dn attribute	Used to perform the search request for the detailed view of an LDAP contact. For example, ldap dn attribute: customDN
ldap dn query mode	Specifies which method to use when an individual record is looked up. If configured as “filter”, the BluStar device performs a DN search using the root base DN with the filter “(dn=XXXX)”. If configured as “base”, the BluStar device performs a DN search using the searched DN as a base with a filter defined in the parameter “ldap dn base query filter” and a scope defined in the parameter “ldap dn base query scope”. For example, ldap dn query mode: base **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.
ldap dn base query filter	Filter used when an individual record is looked up if the parameter “ldap dn query mode” is set to “base”. For example, ldap dn base query filter: (objectClass=*) **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.

Parameters in Configuration Files	Description
ldap dn base query scope	Scope used when an individual record is looked up if the parameter “ldap dn query mode” is set to “base”. A "base" search is performed only on the base DN, a "onelevel" search is performed on the base DN and the first sublevel, and a "subtree" search is performed on the whole tree under the base DN. For example, ldap dn base query scope: onelevel **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.
ldap search filter	Used to set search filters. This parameter format must follow RFC 4515, for example (sn=%). This parameter must include a '%' character at the place where it will be replaced by a*, b*, etc... For example, ldap search filter: (&(sn=%)(number=*))
ldap search scope	Used to set the search scope. A "base" search is performed only on the baseDN, a "onelevel" search is performed on the baseDN and the first sublevel, and a "subtree" search is performed on the whole tree under the base DN. For example, ldap search scope: onelevel
ldap search timeout	Used to set the request timeout for LDAP requests. A range of 1 to 120 is applicable. For example, ldap search timeout: 30
ldap network timeout	Used to set the network timeout for LDAP requests. A range of 1 to 120 is applicable. For example, ldap network timeout: 50
ldap initial download delay	Used to set the LDAP initial download delay. Setting a value of 0 does not introduce any delay and the initial download is performed synchronously during the login process. With all other values, the download is performed asynchronously, delayed by the value amount (in seconds) after the login process. A range of 0 to 120 is applicable. For example, ldap initial download delay: 60
ldap use iso-8859-1 encoding	Specifies whether or not the LDAP directory the BluStar device is configured to use utlizes ISO-8859-1 or UTF-8 encoding. If the LDAP directory utlizes ISO-8859-1 encoding and the parameter is set to “1”, the device will transcode any characters using diacritical marks from the ISO-8859-1 character set to the equivalent UTF-8 characters, correcting any character encoding issues. For example, ldap use ISO-8859-1 encoding: 1 **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.

To Configure Advanced LDAP Settings:

Use the following procedure to configure advanced LDAP settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Advanced LDAP Settings on page A-35.

Microsoft Exchange Contacts

Users can import their Microsoft Exchange contacts into their BluStar 8000i and BluStar for Conference Room address books. This allows users to stay in sync with their business contacts. Any changes (i.e. users create, modify, or delete contacts) made to contacts on the BluStar device and/or on the PC will automatically update the Microsoft Exchange contacts in real time. Users can also use Secure Sockets Layer (SSL), which provides secure communications over the Internet. All data exchanged is also encrypted to increase security.

Notes:

- If users import Microsoft Exchange personal contacts, they will not have access to their user directory set by the "directory 2" parameter.
- Microsoft Exchange 2007 is not supported (i.e. Microsoft Exchange version must either 2003 or 2007 SP1 or greater).
- When upgrading from Exchange 2003 to Exchange 2007 SP1 or greater, as the contact unique ID is different between the two interfaces, a favorite created using Exchange 2003 must be recreated when Exchange 2007 SP1 or Greater is configured.
- Exchange 2007 SP1 or greater contact pictures are supported and take precedence over picture IDs stored on any configured image servers.

To Configure Exchange Contacts Settings:

The following parameters can be used to configure the Microsoft Exchange contacts settings:

Parameters in Configuration Files	Description
enable user defined exchange contacts	Specifies whether to enable or disable a user's ability to edit his or her Microsoft Exchange contacts configuration. For example, enable user defined exchange contacts: 1
exchange contacts enabled	Specifies whether a user's Microsoft Exchange contacts should be synced with the device's address book. When enabled, the user will not be able to access the personal contacts that have been set up by the administrator. For example, exchange contacts enabled: 1
exchange default locked	Indicates whether or not the default configuration parameters can be modified or not by the user. It applies only if a default value is configured. If no defaults are set, the configuration parameter can still be modified by the user. Example, exchange default locked: 1
exchange default interface type	Specifies the default interface type to use to communicate with the Exchange server. For example, exchange default interface type: 2
exchange email	Specifies the user's Microsoft Exchange email address. For example, exchange email: john.doe@acme.com
exchange default server ip	Specifies the default server IP address or name for the Exchange server hosting the interface (Exchange 2003 or Exchange 2007 SP1 or greater). For example, exchange default server ip: mail.acme.com
exchange server ip	Specifies the user's Microsoft Exchange server IP address or Fully Qualified Domain Name (FQDN). For example, exchange server ip: mail.acme.com
exchange user domain	Specifies the user's Microsoft Exchange domain name. For example, exchange user domain: acme
exchange default contact folder name	Specifies the default contact folder name to be used to access the user contact. This parameter is language dependent and applies only if the interface type is configured as Exchange 2003. Example, exchange default contact folder name: Contacts
exchange contact folder name	Specifies the optional custom folder that will be used to store the user's Microsoft Exchange contacts. This parameter is language dependent and applies only if the interface type is configured as Exchange 2003. For example, exchange contact folder name: Exchange
exchange default use login credentials	Specifies whether or not the BluStar device login credentials are used to authenticate to the Exchange server. For example, exchange default use login credentials: 0

Parameters in Configuration Files	Description
exchange use login credentials	Specifies whether the user's BluStar device user name and password is the same the user's Microsoft Exchange user name and password (enabled) or if login credentials should be manually input (disabled). For example, exchange use login credentials: 1
exchange username	Specifies the user's Microsoft Exchange user name. This parameter is only used if the parameter "**exchange use login credentials"** is set to disabled. For example, exchange username: jdoe
exchange password	Specifies the user's Microsoft Exchange password. This parameter is only used if the parameter "**exchange use login credentials"** is set to disabled. **Note:** The "**exchange password"** parameter is available in the user.cfg file, but the password string will be encrypted. The password can only be input by the user through the **contacts** menu on the user's respective BluStar device.
exchange default ssl enabled	Specifies the default SSL configuration to use to communicate with the Exchange server. For example, exchange default ssl enabled: 1
exchange ssl enabled	Specifies whether SSL (Secure Sockets Layer) should be enabled or disabled. For example, exchange ssl enabled: 1
exchange custom ews path	Configures a custom Exchange Web Services (EWS) path on the Exchange server hosting the EWS managed API. By default the path is "ews/exchange.asmx" on a typical Microsoft Exchange installation. This parameter applies only if the interface type is configured as Exchange 2007 SP1 or greater. Example, exchange custom ews path: custom_ews/exchange.asmx

Use the following procedure to configure the Microsoft Exchange contacts settings.

Configuration Files

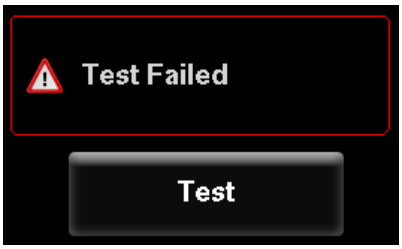
For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Microsoft Exchange Contact Settings on page A-46.

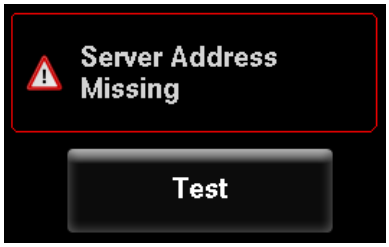
To Configure the Microsoft Exchange Contacts on the BluStar Device UI:

1. Select the **App Menu** button, **Tools**, then the **Contacts** button.
2. Select the **Use Microsoft Exchange Personal Contacts** button.
   Notes:
   - When you select this option you wont be able to access your personal contacts that have been set up by an administrator.
   - Selecting the **Default** button at any time will reset applicable fields to their default values (if default values have been configured by an administrator).
3. Select either **Exchange 2003** or **Exchange 2007 SP1 or Greater** using the **Interface** drop-down menu.

4. Enter your Microsoft Exchange **Email** address. For example, "johndoe@acme.com".
5. If using **Exchange 2007 SP1 or Greater**, enter in your Microsoft Exchange **Username** and **Password** and select the **Auto-Discover** button to initiate an auto-discovery request.
   If the auto-discovery process is successful, continue to Step 10 as the settings will be automatically propagated with the necessary information.
   If the auto-discovery process is not successful, you will see the following error message:

   If you are using **Exchange 2003** or if the auto-discovery request is not successful, continue with the steps below to manually enter your Exchange details
6. Enter the **Microsoft Exchange Server** name or IP address. For example, "mail.acme.com"
7. Select **Use SSL** if your Exchange server utilizes Secure Sockets Layer (SSL) for communication over the Internet.
8. Select **Use Login Credentials** if your BluStar device user name and password is the same as your Microsoft Exchange user name and password.
   OR keep this option unselected and manually enter in your Microsoft Exchange **Domain** (optional for Exchange 2003, not required for Exchange 2007 SP1 or Greater), **Username,** and **Password**.
9. Select use custom folder name and enter the contact folder name if you want to create a custom folder for your Microsoft Exchange contacts.
   Note:
   This option is only available when using Exchange 2003.
10. Select the **Test** button to test the configuration.
    If the configuration is successful, there will be a green check mark above the test button (see image above).
    If the test failed, you will see an error message similar to the ones below.





   If you see an error message, go back and re-enter the fields with the correct information.

LDAP Directory/Exchange Contacts Update Interval

Configuration parameters are available that allow administrators the ability to configure detailed update schedules for the LDAP directory and Exchange contacts. These parameters include:

Parameter in Configuration Files	Description
LDAP Directory	
ldap resync time	Sets the time of day in a 24-hour period for the BluStar device to automatically update the LDAP directory. Example: ldap resync time: 03:15
ldap resync days	Specifies the amount of days that the device waits between resync operations for the LDAP directory. Example: ldap resync days: 1

Parameter in Configuration Files	Description
ldap resync max delay	Specifies the maximum time, in minutes, the device waits past the scheduled time before starting a resync for the LDAP directory. Example: ldap resync max delay: 60
Exchange Contacts	
exchange contacts resync time	Sets the time of day in a 24-hour period for the BluStar device to automatically update the Exchange contacts. Example: exchange contacts resync time: 03:15
exchange contacts resync days	Specifies the amount of days that the device waits between resync operations for the Exchange contacts. Example: exchange contacts resync days: 1
exchange contacts resync max delay	Specifies the maximum time, in minutes, the device waits past the scheduled time before starting a resync for the Exchange contacts. Example: exchange contacts resync max delay: 60

Notes:

- Resync time is based on the local time of the BluStar device.
- Resync will occur any time between the values set for the "[ldap/exchange contacts] resync time" and "[ldap/exchange contacts] resync max delay" parameters. For example, if the "ldap resync time" parameter is set to 02:00 and the "ldap resync max delay" is set to 30, the LDAP directory update will take place any time between 02:00 and 02:30.

To Configure the LDAP Directory/Exchange Contacts Update Interval:

Use the following procedure to configure the LDAP directory/exchange contacts update interval:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, LDAP Directory/Exchange Contacts Update Interval on page A-51.

Voicemail

Selecting the Voice Mail button on the BluStar device allows a user to directly dial their voicemail and access their messages. Administrators can setup the voicemail feature using the configuration files. The device's phone displays up to 99 voicemail messages for an account even if the number of voicemail exceeds the limit.

Message Indicator

The Voice Mail button will show a message indicator that increments the number of new voicemail messages. In SIP Call Server mode, a (!) may display instead of a number to indicate that there is a new voicemail.

Once a user selects the Voice Mail button to listen to the messages, the message indicator will disappear from the button.

To Configure Voicemail:

You can setup voicemail in the configuration files using the "**sip vmail**" parameter to dial a specific number to access an existing voicemail account. The user then follows the voicemail instructions for listening to voicemails.

Use the following procedure to enable/disable voicemail:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Voicemail Settings on page A-74.

Note:
The SIP account used on the BluStar device must have a configured voicemail box.

Using Voicemail on the BluStar Device UI:

1. On the BluStar device's UI, touch the **Voice Mail** button.
   You will be connected to a voicemail server where you can enter in your password to retrieve your messages.

Note:
If the video voicemail client feature is configured on the respective BluStar device, selecting the telephone feature controls Video Mail button initiates the video voicemail client instead of connecting you directly to your voicemail server. Refer to Video Voicemail Client Integration on page 4-39 for more information.

Video Voicemail Client Integration

The video voicemail client organizes voicemail messages into a simple-to-use and easy-to-access list. Users can view all pertinent details with regards to their voicemail messages (e.g. sender name, phone number, date and time received, message duration, etc.) and manage all voicemail duties (e.g. play, delete, callback, etc.) using the intuitive controls on their touchscreen. A multitude of voicemail account settings can also be easily configured through the video voicemail client.

Notes:

- Video voicemail client integration is a licensed feature. See Licensing on page 4-53 for more information.
- The availability of the video voicemail client integration feature is also dependant on your call manager. Please contact the system administrator of your respective call manager for feature availability details.

Administrators can configure the respective BluStar devices for use with the video voicemail client by defining the following parameters in the configuration files:

Parameter in Configuration Files	Description
voicemail integration url	The url (http or https) the device calls to perform voicemail integration. Example: voicemail integration url: http://myserver.com/integration.php
voicemail integration use login credentials	By default the BluStar devices use SIP credentials to authenticate (digest method) to the voicemail integration server. Enabling this configuration parameter makes the BluStar device use the user login/password instead. Example: voicemail integration use login credentials: 1
voicemail integration needs sip registration	Used by the voicemail integration API to indicate to the software if SIP registration is needed before sending a user command via the API. When enabled, the BluStar device checks the extension registration status before sending an API command. If the extension is not registered, an error message is displayed. Example: voicemail integration needs sip registration: 1

Note:

In addition to the above parameters, please ensure that “sip xml notify event” is enabled. For more information, refer to XML SIP Notify Events on page 5-5.

Configuring Video Voicemail Client Integration

Use the following procedure to configure video voicemail client integration on the BluStar device:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Video Voicemail Client Integration Settings on page A-75.

Emergency Dial Plan

Public telephone networks in countries around the world have a single emergency telephone number (emergency services number) that allows a caller to contact local emergency services for assistance when required. The emergency telephone number may differ from country to country. It is typically a three-digit number so that it can be easily remembered and dialed quickly. Some countries have a different emergency number for each of the different emergency services.

You can specify the digits to dial on the BluStar device for contacting emergency services. Once you specify the emergency number(s) on the device, you can dial those numbers directly on the dial pad when the device is locked and the device will automatically dial to the specified emergency service.

Note:
Contact your local phone service provider for available emergency numbers in your area.

The following table describes the default emergency numbers on the BluStar devices.

Emergency Number	Description
911	A United States emergency number
999	A United Kingdom emergency number
112	An international emergency telephone number for GSM mobile phone networks. In all European Union countries it is also the emergency telephone number for both mobile and fixed-line telephones.
110	A police and/or fire emergency number in Asia, Europe, Middle East, and South America.

Emergency Dial Plan and Pattern Matching

The BluStar 8000i and BluStar for Conference Room support emergency dialing using pattern matching and prepend dial plan functionality.

There are two ways to dial a number on the device:

- dialing digit-by-digit (i.e. select line and dial)
- dialing by string (i.e. pre-dial then go off-hook)

When a user dials digit-by-digit, the device adds every digit to a dialed string and checks against the dial plan. If the device is not locked, it checks against the regular dial plan. If the device is locked, it checks against the emergency dial plan.

When a user dials by string, (pre-dial, speed-dial, etc., and then goes off-hook), and the device is not locked, it checks to see if the number matches the emergency dial plan. If it does not match, it blocks the call from going through. If the device is locked, and the number matches the emergency dial plan it allows the call to go through.

Adding a prepend to a dial plan also works with both dialing digit-by-digit and dialing by string.

Limitation

A secondary dial tone is not supported for emergency dial plans with pattern matching.

Configuring an Emergency Dial Plan

Use the following procedure to configure an emergency dial plan.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Emergency Dial Plan Settings on page A-76.

Picture ID Feature

The Picture ID feature on the BluStar 8000i and BluStar for Conference Room show a picture ID of a caller on screen for all of the following events:

- Incoming calls (matched to caller ID numbers)
- Outgoing calls (matched to dialed numbers)
- Directory entries
- Callers list entries
- Redial list entries

The pictures are stored in a centralized picture repository and are dynamically retrieved from the centralized server for each call and then locally cached on the BluStar device to reduce network traffic.

If there is no picture on the central server for the dialed and/or caller ID number, directory, callers list, and/or redial list entry, the generic blue figure image is shown.

Generic Blue Image

Pictures can be in either “png”, “gif”, or “jpeg” formats, but must be named “.png”, up to 320 pixels wide x 320 pixels tall, and in 24 bit color.

The filenames for pictures must be stored using the phone number as the filename using only digits (for example, 9995551234.png).

Note:
The picture ID feature supports the use of FTP, TFTP, HTTP, and HTTPS protocols when downloading pictures.

To Enable/Disable Picture ID:

Enabling the picture ID feature on the BluStar device can be performed using the “**image server uri**” parameter. Entering no value for this parameter disables the feature. The parameter format is the following:

image server uri: [protocol]://[username]:[password]@[server]:[port]

Use the following procedure to enable the picture ID feature.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Picture ID Feature on page A-81.

Busy Lamp Field (BLF)

The BLF feature on the BluStar 8000i and BluStar for Conference Room allow users to monitor their favorite contacts (speed dial list) for state changes. BLF monitors the status (available [green], ringing [yellow], busy [red], and unavailable [black]) of extensions on the BluStar device.

Example

A supervisor has a worker added to her favorites and she configures BLF on her BluStar 8000i for monitoring the status of the worker's BluStar 8000i use (busy, ringing, available, and unavailable). When the worker picks up his BluStar 8000i to make a call, the contact button goes red (busy) on the supervisor's BluStar 8000i favorites screen to show that the worker's phone is in use.

Note:
Visual enhancement icons can also be enabled for users with color vision deficiency if required. See Visual Enhancement for BluStar Server Interoperability and Busy Lamp Field (BLF) Features on page 4-49 for more information.

BLF Setting

(For use with Asterisk)

The busy, available, and unavailable state is monitored for other BluStar devices configured on the Asterisk server. When the monitored user is available, the contact button is green and says *Available*. When the monitored user is on an active call, the contact button is red and says *Busy*. When the user is unavailable, the contact button is black and says *Unavailable*.

BLF/List Setting

(For use with the BroadSoft Broadworks Rel 13 or higher platforms only)

The BLF/List feature on the BluStar devices are specifically designed to support the BroadSoft Broadworks Rel 13 Busy Lamp Field feature. This feature allows the BluStar device to subscribe to a list of monitored users defined through the BroadWorks web portal.

In addition to monitoring the available, unavailable, and busy state, the BLF/List feature also supports the ringing state. When the monitored user is available, the contact button is green and says *Available*. When the monitored user is in a ringing state, the contact button is yellow and says *Ringing*. When the monitored user is on an active call, the contact button is red and says *Busy*. When the user is unavailable, the contact button is black and says *Unavailable*.

You can specify the BLF list URI that the BluStar device uses to access the required BLF list using the "**list uri**" parameter in the configuration files.

Configuring BLF/List Setting

Use the following procedure to configure the BLF/List setting:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, BLF List URI Settings on page A-81.

BLF Subscription Period

On the BluStar 8000i and BluStar for Conference Room, you can set the amount of time, in seconds, that the BluStar device will attempt to subscribe to the BLF subscription service after a user logs in to his/her account. The BluStar device will attempt to subscribe to the BLF subscription service before the defined subscription period ends. In the configuration files, enter the following parameter with a valid value to set the BLF subscription period:

sip blf subscription period: <value in seconds>

The minimum value for this parameter is 120 seconds (2 minutes). The default value is 3600 seconds (1 hour). If you enter a value lower than 120 for this parameter, the default value (3600) will be used by the BluStar device.

Configuring BLF Subscription Period

Use the following procedure to configure the BLF subscription period on the BluStar device:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, BLF Subscription Period Settings on page A-82.

Directed Call Pickup

Directed call pickup is a feature on the BluStar 8000i and BluStar for Conference Room that allows a user to intercept a call on a ringing BluStar device that is part of the same interception group. You can use the directed call pickup feature with the existing BLF feature. You can specify the directed call pickup feature by using the "**directed call pickup**" parameter in the configuration files.

With Asterisk, a user can dial *76 followed by the extension to pick up a ringing call on another BluStar device. For more information about BLF, see Busy Lamp Field (BLF) on page 4-42.

Note:

The Asterisk and Epygi Quadro 4x/16x IP PBX servers support this feature. For details about Asterisk support, contact Aastra Technical Support.

Directed Call Pickup Prefix (optional)

The optional "**directed call pickup prefix**" parameter allows you to enter a specific prefix string (depending on what is available on your server), that the BluStar device automatically dials when dialing the directed call pickup number.

For example, for Broadsoft servers, you can enter a value of *97 for the "**directed call pickup prefix**" parameter. When the BluStar device performs the directed call pickup after a user selects a BLF or BLF/List softkey, the device prepends the *97 value to the designated extension of the BLF or BLF/List softkey when dialing out.

How this feature works when Directed Call Pickup is enabled with BLF or BLF/List

1. BluStar device A monitors BluStar device B via BLF/List.
2. BluStar device C calls BluStar device B; BluStar device B rings.
3. If you select the BLF/List softkey on BluStar device A, it picks up the ringing line on BluStar device B.
4. BluStar device C connects to BluStar device A.

How this feature works when Directed Call Pickup is disabled with BLF or BLF/List

1. BluStar device A monitors BluStar device B via BLF/List.
2. BluStar device C calls BluStar device B; BluStar device B rings.
3. If you select the BLF/List softkey on BluStar device A, it performs a speed dial to BluStar device B.
4. BluStar device C and BluStar device A are ringing BluStar device B on separate lines (if available).

Notes:

- The default method for the BluStar device to use is directed call pickup over BLF if the server provides applicable information. If the directed call pickup over BLF information is missing in the messages to the server, the directed call pickup by prefix method is used if a value for the prefix code exists in the configuration.
- You can define only one prefix at a time for the entire BLF/List.
- The BluStar device that picks up the call displays the prefix code + the extension number (for example, *971234 where prefix key = *97, extension = 1234).

Configuring Directed Call Pickup

Use the following procedure to enable or disable the directed call pickup feature on the BluStar device:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Directed Call Pickup on page A-82.

Configuring BLF/BLF List for Directed Call Pickup

Use the following procedure to configure BLF/BLF List for directed call pickup:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, BLF List URI Settings on page A-81.

BluStar Server Interoperability

The BluStar devices are fully interoperable with the BluStar Server. By defining presence server and user details, the BluStar devices will be able to take advantage of the enhanced presence capabilities offered by the BluStar Server.

The BluStar Server aggregates presence information from multiple sources and relays the information to the BluStar devices. BluStar device users are able to monitor the status for any contacts connected to the BluStar Server through their Favorites, Search, Contacts, History, and Directory menus as well as obtain more detailed status information through an individual's partial contact information display or full contact information page. Status information available in the various menus and pages include:

- Presence status bars and information (default as well as personalized status text).
- Line state details.
- Microsoft Exchange calendar activity.

Presence Status

Presence status bars and information can be found in the Favorites, Search, Contacts, History, and Directory menus as well as an individual's partial contact information display or full contact information page. The available presence states, their corresponding colors, and priority details (from highest to lowest) are as follows:

Priority	Presence States	Status Bar Color
1	Unavailable Do Not Disturb	
2	Busy In a Call In a Meeting Inactive Away Be Right Back Other	
3	Available	
4	Signed Out	
5	Unknown	

Notes:

- Visual enhancement icons can also be enabled for users with color vision deficiency if required. See Visual Enhancement for BluStar Server Interoperability and Busy Lamp Field (BLF) Features on page 4-49 for more information.
- When the telephony DND feature is enabled on the BluStar device (i.e. configuration parameter "**dnd ui**" is set to 1), the "Do Not Disturb" presence status is synchronized with the telephony DND feature. If the telephony DND feature is disabled (either through the configuration files [i.e. "**dnd ui**" is set to 0] or server-side by the call manager) the "Do Not Disturb" presence status and telephony DND feature are not synchronized.
  - When synchronized, changing presence status to "Do Not Disturb" will also turn on the telephony DND feature on the BluStar device whereby incoming calls will automatically be rejected or (if configured) forwarded to a voicemail account/another number. Selecting the "Available" presence status option will turn off the telephony DND feature on the BluStar device.
    The inverse is also applicable whereby turning on the telephony DND feature will automatically change the presence status to "Do Not Disturb". Turning off the telephony DND feature will change the presence status back to "Available". You can enable/disable the telephone DND feature by selecting the

button in the Telephone Feature Controls.
  - When not sychronized, changing your presence status to "Do Not Disturb" will only affect your presence status. Incoming calls will not be rejected or forwarded.

Line States

Line states can be found by navigating to an individual's partial contact information display or full contact information page. The available line states and their corresponding indicators are as follows:

Line States	Line State Indicator
Idle	
Busy	
Unknown	

Note:

Visual enhancement icons can also be enabled for users with color vision deficiency if required. See Visual Enhancement for BluStar Server Interoperability and Busy Lamp Field (BLF) Features on page 4-49 for more information.

Calendar Activity

BluStar devices will also display Microsoft Exchange calendar activity if applicable. When the contact's status text is displayed as "In a Meeting", navigating to the individual's partial contact information display will reveal when the appointment is scheduled to end. Furthermore, navigating to the individual's full contact information page will show additional appointment details (if configured on the BluStar Server) such as the appointment's subject.

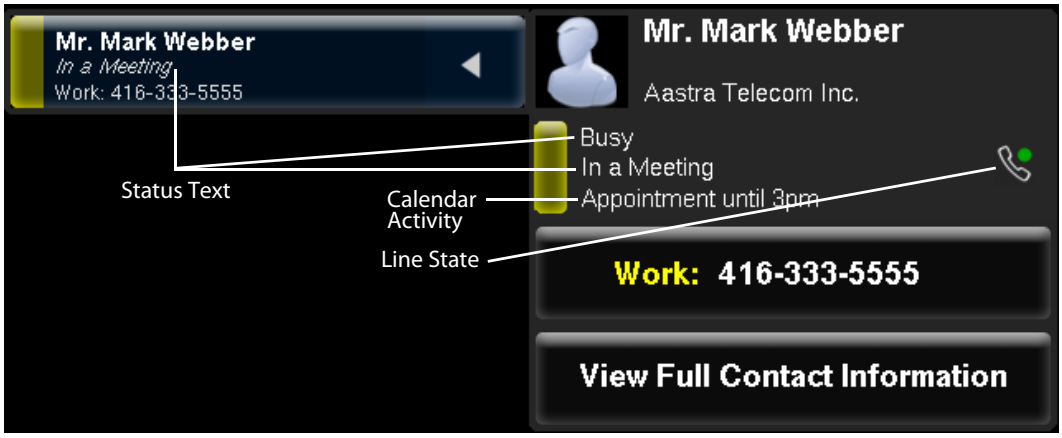
Note:

Additional appointment details may be displayed as simply "Private Data" in which case the BluStar Server has been configured to not display the appointment's subject line.

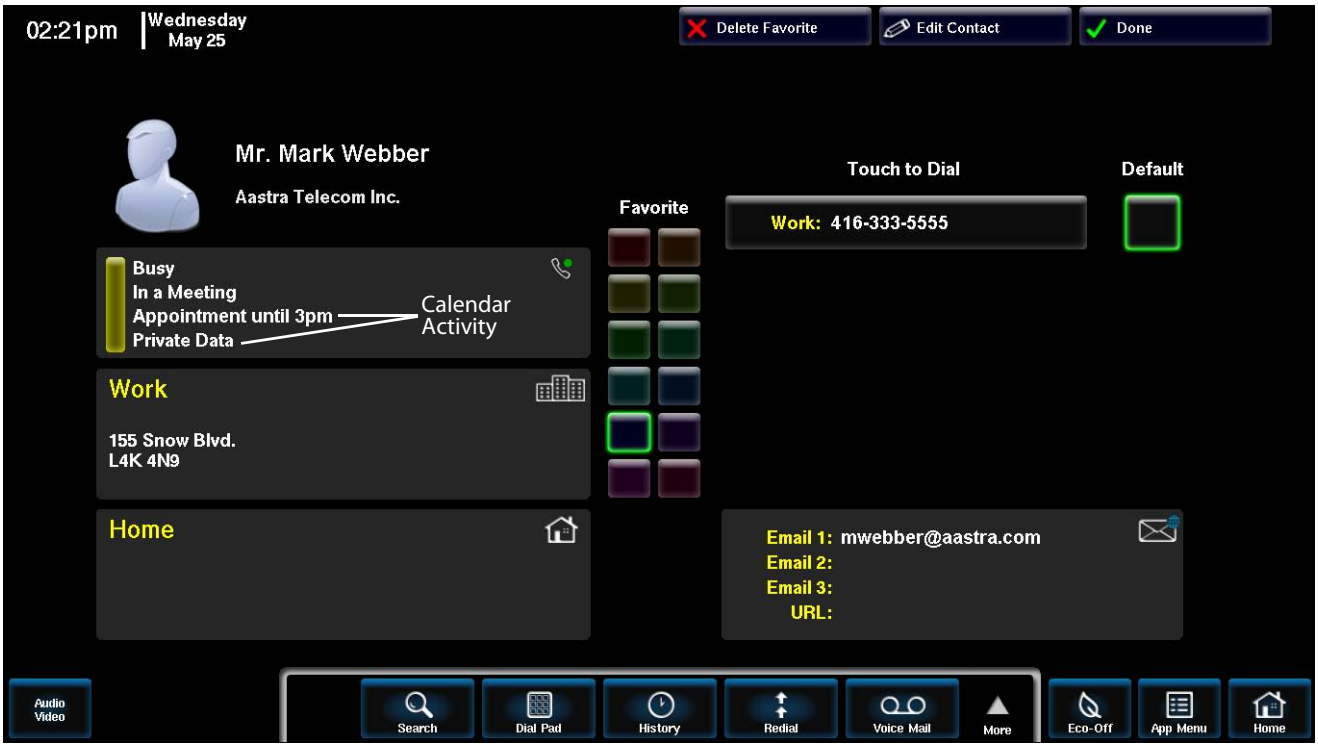
Examples

Favorites Menu

Partial Contact Information Display



Full Contact Information Page



Administrators can configure presence server and user details using the configuration files. The server address/name and port are defined using the "**sip presence server**" and "**sip presence server port**" parameters, while user credentials are defined using the "**sip presence user name**" parameter.

Notes:

- At a minimum, the "**sip presence server**" and "**sip presence user name**" (including a valid e-mail address) must be defined in the configuration files to enable this feature.
- When the parameters are defined, the BluStar device will no longer send SUBCRIBE messages for the Busy Lamp Field (BLF) feature.

Configuring BluStar Server Interoperability Settings

Use the following procedure to configure BluStar Server interoperability settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, BluStar Server Interoperability Settings on page A-83.

Visual Enhancement for BluStar Server Interoperability and Busy Lamp Field (BLF) Features

A "**visual enhancement**" configuration parameter is available that can be used to enable visual aids (i.e. icons) for the presence color status bars and line state indicators for the BluStar interoperability feature and the color status bars for the BLF feature. This allows users that have a color vision deficiency to differentiate presence status, line states, or BLF status by icon rather than by color.

Visual Enhancement BluStar Server Interoperability Presence Status and Line States

When the "**visual enhancement**" parameter and BluStar interoperablity is enabled, the following changes are applied:

Presence States	Visual Enhancement Disabled	Visual Enhancement Enabled
Unavailable Do Not Disturb		
Busy In a Call In a Meeting Inactive Away Be Right Back Other		
Available		
Signed Out		
Unknown		

Line States	Visual Enhancement Disabled	Visual Enhancement Enabled
Idle		
Busy		
Unknown		

Configuring Visual Enhancement Settings

Use the following procedure to configure visual enhancement settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Visual Enhancement Settings on page A-84.

Diversion Display

When an outgoing call from a BluStar device is being diverted to another destination (i.e., via call forward), the device displays the caller ID (display name and username) of the new destination and the reason for the call diversion. Similarly, at the new destination, the caller ID of the original call destination displays.

Call Diversion Example:

1. Tim calls Mark at x400.
2. Mark's BluStar device is busy.
3. Mark's BluStar device diverts the incoming call to another destination (Mark has immediate call forwarding set to Roger @ ext. 464).
4. Tim's BluStar device displays the name and extension of where the call is being diverted to and the reason for diverting the call.

5. Roger's BluStar device accepts the call and displays the name (or number)of the device of the incoming call (Tim) and the name (or number) of the original destination (Mark).

Note:
If proxy servers exist in the network, it is possible that multiple diversions can take place on the devices. When multiple diversion headers are returned in a single 302 response back to the originating device, the device that originated the call (i.e., Tim's BluStar device in above example) displays the URI of the newest (first encountered) Diversion header, but displays the REASON of the oldest (last encountered) Diversion header. The device that receives the diverted call (i.e., Roger's BluStar device in example above) displays the information of the oldest diverted call (last encountered).

Limitations

- The Diversion header assumes that the ID of the 'diverted' caller is passed in a URI style manner.
- This feature relies on the server supporting and generating the diversion header; the device does not generate the header itself.
- The diversion header parameters (i.e., counter, limit, privacy, screen, and extension) are not recognized or supported by the BluStar device. However, they are still passed along during the diversion process.

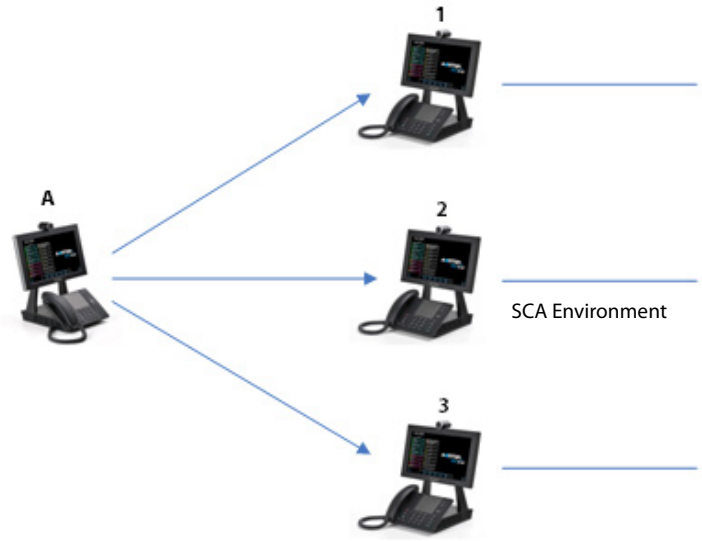
Shared Call Appearance (SCA) and SCA Call Bridging

Shared Call Appearance (SCA) is a feature where incoming calls are presented to multiple devices simultaneously. A use case scenario can be seen in situations where an executive's line is available to be handled on the executive's BluStar device and by the executive's assistant on the assistant's BluStar device. It is also useful in general situations where there is a need to handle incoming calls on a main line from multiple locations.

Calls can be transferred between two devices that share a SCA line by simply putting the call on hold at one device and picking it up on the other. Line status changes are reflected on each respective device in unison, allowing all people sharing the line to see the status at a glance.

BluStar devices also include an enhanced SCA for servers that support call bridging and allows two or more SCA users to be connected in a call with a third party.

Refer to the following example:



Using the example above, when a call comes into device 1, device 2 and device 3 can join the same call either by touching the pickup icon in the expanded call appearance bar or by picking up/enabling the handset/headset. Existing SCA parties in a bridge or one-to-one call hear an audible beep when another party joins the call.

Note:
Enabling/disabling the beep is configurable on the server-side.

If a device is configured for SCA bridging but the account on the server does not have this functionality enabled the pickup option will not be available. Additionally, if the handset is picked up, a message will be displayed stating the line is in use.

The SCA call bridging feature is disabled by default on all devices. You can enable this feature using the configuration files only. Administrators can configure BluStar devices for use with SCA and SCA call bridging by utilizing the following parameters:

Parameters in Configuration Files	Description
sip mode	The mode-type that you assign to the BluStar device. Valid values are Generic (0), BroadSoft SCA (1), Reserved for (2), or BLA (3). Default is Generic (0). For example, sip mode: 1
sip sca bridging	Enables/disables SCA bridging on the device-side on a global basis. For example, sip sca bridging: 1

To Configure SCA Lines Using the Configuration Files:

Use the following procedure to enable/disable the SCA feature on the BluStar device:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Shared Call Appearance (SCA) Call Bridging on page A-26.

XML Settings

Extensible Markup Language (XML) is a markup language much like HTML. HTML was designed to display data and to focus on how data looks. XML was designed to describe data and to focus on what data is.

The following are characteristics of XML:

- XML tags are not predefined. You must define your own tags
- XML uses a Document Type Definition (DTD) or an XML Schema to describe the data
- XML with a DTD or XML Schema is designed to be self-descriptive
- XML is a W3C Standard Recommendation

XML Get Timeout

The BluStar 8000i and BluStar for Conference Room have a parameter called, "**xml get timeout**" that allows you to specify a timeout value, in seconds, that the BluStar device waits for the far side to return a response after accepting the HTTP GET connection. If the far side accepts the GET connection but never returns a response, it blocks the device until it is rebooted.

The default is "0" (never timeout). If you enter a value greater than "0" for this parameter, the BluStar device times out and will not be blocked.

Configuring XML Get Timeout

Use the following procedure to configure the XML Get Timeout feature on the BluStar device:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, XML Settings on page A-84.

Licensing

Licenses can be obtained that will allow users to utilize additional features on the BluStar 8000i and BluStar for Conference Room. Licenses are available for the following BluStar device features:

Feature	Description
G.729	License to integrate G.729 codec functionality. G.729 is a multi-purpose ITU-T standard that allows for increased bandwidth availability and short delay. The ITU officially describes G.729 as "coding of speech at 8 kbit/s using CS-ACELP".
VPN	License to integrate VPN functionality. The BluStar devices integrate an OpenVPN client for authentication and remote access to the corporate network. OpenVPN is a highly-flexible open-source VPN application available for a multitude of operating systems that utilizes SSL/TLS for key exchange. Utilizing OpenVPN Access Server, administrators can set up and configure their networks to allow remote devices access to the corporate network ensuring that all the conferencing and collaboration capabilities of the BluStar devices can be fully utilized in a remote environment. **Note:** See Virtual Private Network (VPN) on page 3-12 for more information.
Video Voicemail Client	License to integrate the video voicemail client. The BluStar 8000i and BluStar for Conference Room video voicemail client organizes voicemail messages into a simple-to-use and easy-to-access list. Users can view all pertinent details with regards to their voicemail messages and manage all voicemail duties using the intuitive controls on their touchscreen. A multitude of voicemail account settings can also be easily configured through the video voicemail client. **Note:** The availability of the video voicemail client integration feature is dependant on your call manager. Please contact the system administrator of your respective call manager for feature availability details. See Video Voicemail Client Integration on page 4-39 for more information.

Note:
Please contact your respective Aastra representative for information on obtaining licenses.

To Install Licenses:

1. Place the license file(s) on your configuration server.
2. Restart the affected BluStar devices as described in Logging Off / Restarting on page 1-15.
3. Ensure the licenses are enabled by viewing the **Licensed Features** information through the **Status** app.

Chapter 5
Advanced Operational Features

The BluStar 8000i and BluStar for Conference Room have specific advanced operational features that you can configure. This chapter describes each feature and provides procedures for configuring a BluStar device to use these features.

Advanced Operational Features

This section provides information about the following advanced features on the BluStar 8000i and BluStar for Conference Room:

- Update Caller ID During a Call
- MAC Address in REGISTER Messages
- SIP Message Sequence for Blind Transfer
- Removing UserAgent and Server SIP Headers
- Removing Inactive Video Streams in the SDP
- Blacklist Duration
- Whitelist Proxy
- Transport Layer Security (TLS)
- Symmetric UDP Signaling
- XML SIP Notify Events
- Configurable DNS Queries
- Ignore Out of Sequence Errors
- Switching Between Early Media and Local Ringing
- Configurable “Allow” and “Allow-Event” Optional Headers
- Configurable SIP P-Asserted Identity (PAI)
- Configurable Compact SIP Header
- Configurable Dial Plan Terminator
- Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED)

Update Caller ID During a Call

It is possible for a proxy or call server to update the caller ID information that displays on the BluStar device during a call, by modifying the SIP Contact header in the re-INVITE message. The BluStar device displays the updated name and number information contained within the Contact header. The “**sip update callerid**” parameter allows the system administrator to enable or disable this feature.

Configuring Update Caller ID During a Call

Use the following procedure to configure the update caller ID feature during a call.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Update Caller ID Setting on page A-85.

MAC Address in REGISTER Messages

The BluStar device can send the MAC address in the REGISTER packets making it easier for the call server when a user configures the device. The following configurable header sends this information to the call server:

```
Aastra-Mac: <mac address>
```

The MAC address is sent in uppercase hex numbers, for example, 00085D03C792. The "**sip send mac**" parameter allows you to enable/disable the sending of MAC address to the call server. The parameter is disabled by default.

Configuring the MAC address in REGISTER Message

Use the following procedure to configure the MAC address in the REGISTER message:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Shared Call Appearance (SCA) Call Bridging on page A-26.

SIP Message Sequence for Blind Transfer

The SIP message sequence for blind transfer avoids the transfer target having two simultaneous calls. A CANCEL message is sent to the transfer target (if it is in a ringing state) before sending a REFER to the transferee to complete the transfer. The "**sip cancel after blind transfer**" parameter allows the system administrator to force the BluStar device to use the blind transfer method.

Configuring SIP Message Sequence for Blind Transfer

Use the following procedure to configure the SIP message sequence for blind transfer:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Blind Transfer Setting on page A-85.

Removing UserAgent and Server SIP Headers

The BluStar device always configures the SIP UserAgent/Server headers to contain:

Aastra <PhoneModel>/<FirmwareVersion>

You can suppress the addition of these headers by using the "**sip user-agent**" parameter in the configuration files. Setting this parameter allows you to enable or disable the addition of the User-Agent and Server SIP headers from the SIP stack.

Configuring UserAgent/Server SIP Headers

Use the following procedure to configure the user agent/server SIP headers:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, User-Agent Settings on page A-85.

Removing Inactive Video Streams in the SDP

The configuration parameter, "remove inactive video stream", can be used to remove the video stream from the SDP in situations where the video stream should be disabled but the audio stream should be kept active. This parameter is disabled by default.

Configuring the Inactive Video Stream SDP Removal Feature

Use the following procedure to configure the inactive video stream SDP removal feature:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Inactive Video Stream Settings on page A-86.

Blacklist Duration

The Blacklist Duration feature helps to reduce unnecessary delays during proxy/registrar server failures, caused by the BluStar device repeatedly sending SIP messages to a failed server. If you enable this feature, whenever the BluStar device sends a SIP message to a server and does not get a response, the device automatically adds the server to the blacklist. The BluStar device avoids sending messages to any servers on the blacklist. If all servers are on the blacklist, then the device attempts to send the message to the first server on the list.

You can specify how long failed servers remain on the blacklist in the device's configuration file. The default setting is '300' seconds (5 minutes). If you set the duration to '0' seconds, then you disable the blacklist feature.

Configuring Blacklist Duration Using the Configuration Files

Use the following procedure to configure the blacklist duration:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Blacklist Duration Setting on page A-86.

Whitelist Proxy

To protect your BluStar device network, you can configure a **Whitelist Proxy** feature that screens incoming call requests received by the device. When this feature is enabled, a BluStar device accepts call requests from a trusted proxy server *only*. The device rejects any call requests from an untrusted proxy server

Configuring Whitelist Proxy Using the Configuration Files

Use the following procedure to configure the whitelist proxy feature:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Whitelist Proxy Setting on page A-86.

Transport Layer Security (TLS)

The BluStar 8000i and BluStar for Conference Room support the Transport Layer Security (TLS) transport protocol. TLS is a protocol that ensures communication privacy between the device and the Internet. TLS ensures that no third party may eavesdrop or tamper with any message.

TLS is composed of two layers: the TLS Record Protocol and the TLS Handshake protocol. The TLS Record Protocol provides connection security using an encryption method, such as Data Encryption Standard (DES). The TLS Handshake Protocol is used for server/client authentication as well as for negotiating the encryption algorithm and cryptographic keys before data is exchanged. TLS requires the use of the following security certificate files to perform the TLS handshake:

- Root and Intermediate Certificates
- Local Certificate
- Private Key
- Trusted Certificate

When the device uses TLS to authenticate with the server, each individual call initiates a new TLS connection. This can prolong the time it takes to place a call. Thus, the BluStar device also has a feature that allows you to setup the connection to the server once and re-use that one connection for all calls from the device. This feature is called Persistent TLS. The connection for Persistent TLS is established during the registration of the device. If the device is configured to use Persistent TLS and a call is made from the device, this call and all subsequent calls use the same authenticated connection. This significantly reduces the amount of time it takes to place a call. An administrator can configure TLS and Persistent TLS using the configuration files.

Notes:

- Persistent TLS requires the "**sip outbound proxy**" and "**sip outbound proxy port**" parameters be configured in the configuration files. For more information on these parameters, refer to SIP Network Parameters on page 3-14.
- There can be only one Persistent TLS connection created per device. The device establishes the TLS connection to the configured outbound proxy.
- If you configure the device to use Persistent TLS, you must also specify the Trusted Certificate file to use. The Root and Intermediate Certificates, Local Certificate, and Private Key files are optional.

A keep-alive feature for Persistent TLS connections is also configurable. When this feature is configured, the device will send keep-alive packets to the proxy server at configured intervals. The keep-alive feature for Persistent TLS connections performs the following functions:

- After a Persistent TLS connection is established or re-established, the keep-alive is activated, which will periodically send a Carriage Return and Line Feed (CRLF) message to the peer.
- The device will retry the connection automatically when a Persistent TLS connection is down.
- When a Persistent TLS connection is re-established (i.e. when the primary proxy server is up, or the primary is down and the backup is up), registration of the accounts associated with the connection is refreshed.
- When a Persistent TLS connection to the primary proxy server is down, the device will switch to the backup if the connection to the backup is working.

You can use the following parameters to configure TLS and Persistent TLS in the configuration files:

- **sip transport protocol**
- **sips persistent tls**
- **sip persistent tls keep alive**
- **sips tls authentication**
- **sip local tls port**
- **sip outbound support**
- **sips root and intermediate certificates**
- **sips local certificate**
- **sips private key**
- **sips trusted certificates**

Use the following procedure to configure TLS and Persistent TLS:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Transport Layer Security (TLS) Settings on page A-87.

Symmetric UDP Signaling

By default, the BluStar 8000i and BluStar for Conference Room use symmetric UDP signaling for outgoing UDP SIP messages. When symmetric UDP is enabled, the device generates and listens for UDP messages using port 5060.

Administrators can manually disable symmetric UDP signaling by defining the "**sip symmetric udp signaling**" parameter in the configuration files. When you disable symmetric UDP signaling, then the device chooses a random source port for UDP messages.

Use the following procedure to configure symmetric UDP signaling:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Symmetric UDP Signaling Settings on page A-94.

XML SIP Notify Events

In order for an XML push to bypass the NAT/firewall, BluStar devices support a proprietary SIP NOTIFY event (aastra-xml) with or without XML content. An administrator can enable/disable the SIP NOTIFY event using the "**sip xml notify event**" parameter.

If XML content is provided in the SIP NOTIFY, it is processed directly by the BluStar device as it is done for an XML PUSH. If the content is empty in the SIP NOTIFY, the device automatically triggers a new pre-configured action URI (action uri xml sip notify).

Example of a SIP NOTIFY with XML Content

```
NOTIFY sip:200@10.30.100.103:5060 SIP/2.0
Via: SIP/2.0/UDP 10.30.100.103:5060;branch=z9hG4bK7bbc1fac;rport
From: <sip:201@10.30.100.103:5060>;tag=81be2861f3
To: Jacky200 <sip:200@10.30.100.103:5060>
Contact: <sip:201@10.30.100.103>
Call-ID: 59638f5d95c9d301
CSeq: 4 NOTIFY
Max-Forwards: 70
Event: aastra-xml
Content-Type: application/xml
Content-Length: 115
<AastraBluStar>
<dnd>
<status>1</status>
</dnd>
</AastraBluStar>
```

When the BluStar device receives the SIP NOTIFY, the XML content is processed as any XML object. In the above example, the device calls http://10.30.100.39/XMLtests/SampleTextScreen.xml after reception of the SIP NOTIFY.

Example of a SIP NOTIFY without XML Content

```
NOTIFY sip:200@10.30.100.103:5060 SIP/2.0
Via: SIP/2.0/UDP 10.30.100.103:5060;branch=z9hG4bK7bbc1fac;rport
From: <sip:201@10.30.100.103:5060>;tag=81be2861f3
To: Jacky200 <sip:200@10.30.100.103:5060>
Contact: <sip:201@10.30.100.103>
Call-ID: 59638f5d95c9d301
CSeq: 4 NOTIFY
Max-Forwards: 70
Event: aastra-xml
Content-Type: application/xml
Content-Length: 0
```

When the BluStar device receives the SIP NOTIFY, it will trigger the "**action uri xml sip notify**" parameter, if it has been previously configured using the configuration files. If the "**action uri xml sip notify**" parameter is not configured, the device does not do anything. On the device side, a system administrator can enable or disable this SIP NOTIFY feature using the configuration files. Also to ensure that the SIP NOTIFY is coming from a trusted source, it is recommended that you enable the Whitelist Proxy feature (**"sip whitelist"** parameter) on the device. If enabled, and the BluStar device receives a SIP NOTIFY from a server that is NOT on the whitelist, the device rejects the message.

Enabling/Disabling XML SIP NOTIFY Using the Configuration Files

To enable/disable the SIP NOTIFY event, you can set the "**sip xml notify event**" parameter in the configuration files. If the content is missing in the SIP NOTIFY message received by the BluStar device, the device automatically uses the value you specify for the "**action uri xml sip notify"** parameter.

Use the following procedure to configure the XML SIP NOTIFY events:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, XML SIP Notify Settings on page A-94.

Configurable DNS Queries

The Domain Name System (DNS) is the way that Internet domain names are located and translated into Internet Protocol addresses. A domain name is a meaningful and easy to remember identifier for an Internet address.

The lists of domain names and IP addresses are distributed throughout the Internet in a hierarchy of authority within a database of records. There is usually a DNS server within close proximity to your geographic location that maps the domain names in your Internet requests or forwards them to other servers in the Internet.

The BluStar 8000i and BluStar for Conference Room may be configured to issue requests for DNS records using one of three methods. In the first method, the BluStar device issues requests for "**A**" records from the DNS server. In the second method, the device issues requests for "**SRV**" records from the DNS server. In the third method, the device issues requests for **NAPTR** records from the DNS server. However, the BluStar device does not use the **NAPTR** record to determine whether to use a secure or unsecure communication path (see the following table for a description of each method).

When the BluStar device accesses the IP network, it issues a DNS lookup request to find the IP address and port and then waits for a response from the DNS service that provides the IP address and port.

Note:
Whether or not the device will operate/communicate in a secure or unsecure mode is ONLY determined by the pre-provisioning of the device (i.e. the .cfg file).

You can configure the BluStar device to use any one of these methods by entering the applicable value in the configuration files:

Configuration File Value	DNS Server Method Used	Description
0	A only	The BluStar device issues requests for "**A**" (Host IP Address) records from the DNS server to get the IP address, and uses the default port number of 5060.
1	SRV & A	The BluStar device issues requests for "**SRV**" (Service Location Record) records from the DNS server to get the port number. Most often, the IP address is included in the response from the DNS server to avoid extra queries. If there is no IP address returned in the response, the BluStar device sends out the request for "**A**" records from the DNS server to find the IP address.
2	NAPTR & SRV & A	First, the BluStar device sends "**NAPTR**" (Naming Authority Pointer) lookup to get the "**SRV**" pointer and service type. For example, if Global SIP transport protocol on the BluStar device is "UDP", and Proxy server on the BluStar device is "test.aastra.com", then: 1. If the **NAPTR** record is returned empty, the BluStar device will use the default value "_sip._udp.test.aastra.com" for the "SRV" lookup. 2. If the **NAPTR** record is returned "test.aastra.com SIP+D2U ...._sip._udp.abc.aastra.com", the BluStar device will use "_sip._udp.abc.aastra.com" for the "**SRV**" lookup. 3. If the **NAPTR** record is returned "test.aastra.com SIP+D2T ...._sip._tcp.test.aastra.com", where the service type TCP mismatches the device configured transport protocol "UDP", the BluStar device will ignore this value and use the default value "_sip._udp.test.aastra.com" for the "**SRV**" lookup. **Note:** The BluStar device does not use the service type sent by the **NAPTR** response to switch its transport protocol, nor does it use the **NAPTR** response to determine whether to use a secure or unsecure communication path. The device will always use a global sip protocol that is configured on the device via configuration files. After performing **NAPTR**, the **device** sends "**SRV**" lookup to get the IP address and port number. If there is no IP address in the "**SRV**" response, then it sends out an "**A**" lookup to get it.

Note:
On the device side, if you configure the device with a Fully- Qualified Domain Name (FQDN) proxy and specified port, the device always sends "**A only**" lookups to find the Host IP Address of the proxy.

Configuring the DNS Query Method

You can configure the DNS query method for the BluStar device to use for performing DNS lookups using the "**sip dns query type**" parameter in the configuration files.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, DNS Query Setting on page A-95.

Ignore Out of Sequence Errors

An administrator can configure the BluStar device via the "**sip accept out of order requests**" parameter to ignore CSeq number errors on all SIP dialogs on the device. When this parameter is enabled, the device no longer verifies that the sequence numbers increase for each message within a dialog, and does not report a "CSeq Out of Order" error if they do not increase.

Enabling/Disabling "Out of Order SIP Requests"

Use the following procedure to enable/disable out of order SIP requests:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Ignore Out of Order SIP Requests on page A-96.

Switching Between Early Media and Local Ringing

Upon receiving a 180 response, the BluStar device generates a local ring tone unless it is receiving an early media flow.

Configurable "Allow" and "Allow-Event" Optional Headers

On the BluStar 8000i and BluStar for Conference Room, an administrator can enable or disable whether or not the optional "Allow" and "Allow-Events" headers are included in the NOTIFY message from the device. SIP NOTIFY messages from the device may contain optional headers called "Allow" and "Allow-events". If the NOTIFY message contains these headers, the UDP packet returned by the server may be too large and may fragment the packet.

To prevent the fragmenting of the UDP packet, the "Allow" and "Allow-events" headers may be removed using the parameter, "**sip notify opt headers**". If this parameter is set to "0" (disabled), the optional headers are not included in the SIP NOTIFY message, which reduces the size of the packet returned by the server, and prevents fragmentation of the packet.

The value set for this parameter specifies whether or not to include the optional headers in the SIP NOTIFY message from the BluStar device. An administrator can enable/disable the optional "Allow" and "Allow-Event" headers using the "**sip notify opt headers**" parameter in the configuration files.

Enabling/Disabling Optional "Allow" and "Allow-Event" Headers

Use the following procedure to enable/disable "Allow" and "Allow-Event" headers:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Optional "Allow" and "Allow-Event" Headers on page A-96.

Configurable SIP P-Asserted Identity (PAI)

The BluStar 8000i and BluStar for Conference Room support a private extension to SIP for Asserted Identity within trusted networks (as defined in RFC 3325). This feature allows a network of trusted SIP servers to assert the identity of authenticated users, and verify that BluStar device messages originate from a Trusted Identity. Upon receiving a message from a caller in the Trusted Network, the device reads the contents of the P-Asserted-Identity (PAI) header field and displays it on the device's UI. The devices provide the ability for the administrator to enable or disable the display of PAI information on the device using the "**sip pai**" parameter in the configuration files.

Enabling/Disabling P-Asserted Identity (PAI)

Use the following procedure to enable/disable PAI:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, P-Asserted Identity (PAI) on page A-96.

Configurable Compact SIP Header

The BluStar 8000i and BluStar for Conference Room provide a feature that allows an administrator to shorten the length of a SIP packet by using the compact form. This feature is in accordance with Compact SIP Headers defined in RFC 3261.

For example, the following SIP header is the long format:

```
Via: SIP/2.0/UDP
10.50.91.2:5060;branch=z9hG4bK571ebe0c;rport=5060;received=10.50.91.2
From: "Unknown" <sip:Unknown@10.50.91.2>;tag=as19d00fc8
To: <sip:1106@10.50.110.54:5060;transport=udp>;tag=916699998
Call-Id: 73cad5456806f3a7768d17e8617279d7@10.50.91.2
CSeq: 102 OPTIONS
```

The following SIP header is equivalent to the above SIP header, however uses the short (compact) format instead:

```
v: SIP/2.0/UDP
10.50.91.2:5060;branch=z9hG4bK571ebe0c;rport=5060;received=10.50.91.2
f: "Unknown" <sip:Unknown@10.50.91.2>;tag=as19d00fc8
t: <sip:1106@10.50.110.54:5060;transport=udp>;tag=916699998
i: 73cad5456806f3a7768d17e8617279d7@10.50.91.2
CSeq: 102 OPTIONS
```

By default, the devices use the long format. However, an administrator can provision the short (compact) format using the "**sip compact headers**" parameter in the configuration files.

Enabling/Disabling the Compact SIP Headers Feature

Use the following procedure to enable/disable the Compact SIP Header in the SIP packet:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Compact SIP Header on page A-97.

Configurable Dial Plan Terminator

The BluStar 8000i and BluStar for Conference Room provide a feature that allows an administrator to configure whether or not pressing the hash/pound (i.e. "#") key, while performing an outgoing call on an open line, should be sent as %23 to the proxy in the dial string or if the key should be used as a dial plan terminator (i.e. dials out the call immediately). By default, the hash/pound key is configured as a dial plan terminator; however, an administrator can change the behavior using the"**sip dial plan terminator**" parameter so that pressing the hash/pound key is sent as %23 instead.

Configuring the Dial Plan Terminator Feature

Use the following procedure to configure the dial plan terminator feature:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Dial Plan Terminator on page A-97.

Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED)

The BluStar 8000i and BluStar for Conference Room support Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED). On the BluStar devices, LLDP-MED performs the following:

- Supports VLAN info from the network policy, (which takes precedence over any manual settings).
- Allows you to enable/disable LLDP-MED if required (using the "**lldp**" parameter).
- Allows you to configure time interval between successive LLDP Data Unit (LLDPDU) frames (using the "**lldp interval**" parameter).
- Allows LLDP packets to be received from the LAN port.
- Allows the device to use the location information, Explicit Congestion Notification (ECN) Emergency Location Identification Number (ELIN), sent by the switch, as a caller ID for making emergency calls (using the "**use lldp elin**" parameter).

Note:
If the BluStar device receives location information in ECN ELIN format (10 to 25 numeric string), the device replaces the caller ID SIP header with the ECN ELIN value and the SIP URI does not change. The device determines if this is an emergency number by checking the emergency dial plan configured on the device.

The devices have a 32 second time-out for listening to LLDP-MED responses when booting up. If LLDP-MED responses are received after this initial listening period, the BluStar device will ignore the response. Administrators can configure this time-out interval using the "**lldp startinterval**" parameter. This parameter is only valid during the boot-up process and it will control the LLDP-MED time-out interval where the device sends LLDP-MED advertisements and listens for the LLDP-MED responses from the switch before proceeding to the DHCP stage.

Administrators can also configure the optional LLDP-MED Inventory Management Type-Length-Value (TLV) sets. Using the "**lldp optional inventory management tlv**" parameter, administrators can configure the device to either send all Inventory Management TLV (1) sets or to send none (0) .

Configuring the LLDP-MED Settings

Use the following procedure to configure the LLDP-MED settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, LLDP-MED Settings on page A-97.

Chapter 6
Troubleshooting

The chapter describes information available to an administrator for troubleshooting purposes. It also includes answers to questions you may have while using the BluStar 8000i and BluStar for Conference Room in SIP Call Server mode.

Status

In the App menu on the BluStar device's UI, you can find information about the device by selecting the **About** or **Status** apps.

About

The about app provides software, hardware, copyright, restrictions, and limited rights information for the BluStar device. You will see the following information on the about screen:

- Software
- Hardware
- Serial Number
- MAC Address
- IP Address
- Legal Information

Status

When the device is idle, the Status app displays current operating status and version information.

Network Info

Displays network address and link status for the device's network connection. If ATM is connected, network info provides a link to view the UNI configuration settings.

Detailed Media Info

- Audio Details
  - Displays details about the audio configuration and audio packet statistics
  - Displays transmit and receive statistics for the device's audio traffic
- Video Details
  - Displays details about the self view and main window statistics
  - Displays transmit and receive statistics for the device's video traffic
  - Displays camera status information
  - Displays video codec status information
  - Displays details about the video display

10/100/1000M Gigabit Ethernet Switch Controller

Displays information on link status information.

System Temperature and Voltage Sensors

Displays the current temperature and voltage levels of the device systems.

Disk Info

Displays disk and memory usage information.

VAV Driver Info

Displays information about the BluStar device Encoder DSP driver.

Memory/System Info

Displays details about the system processes, device up time, CPU load, and memory usage.

Server Configuration Files

Displays which server configuration files (i.e. security.tuz, aastra.cfg/tuz, <model>.cfg/tuz, and <mac>.cfg/tuz) and licences have been downloaded successfully at boot up. Transfer failures of any critical files (e.g. aastra.cfg) are indicated in bold red.

User Configuration Files

Displays which user configuration files (i.e. security.tuz, <user>.cfg/tuz, <user>_local.cfg/tuz) have been downloaded successfully at boot up.

Configuration Info

Contains links to device configuration (aastra.cfg, <model>.cfg, and <mac>.cfg) information and user configuration (<user>.cfg) files.

Licensed Features

Displays details about the specific licenses installed for the BluStar device.

Graphic Status Page

During calls on the BluStar 8000i and BluStar for Conference Room, administrators can select the Status app on the respective device and a graphic status page will be displayed detailing information regarding the following items:

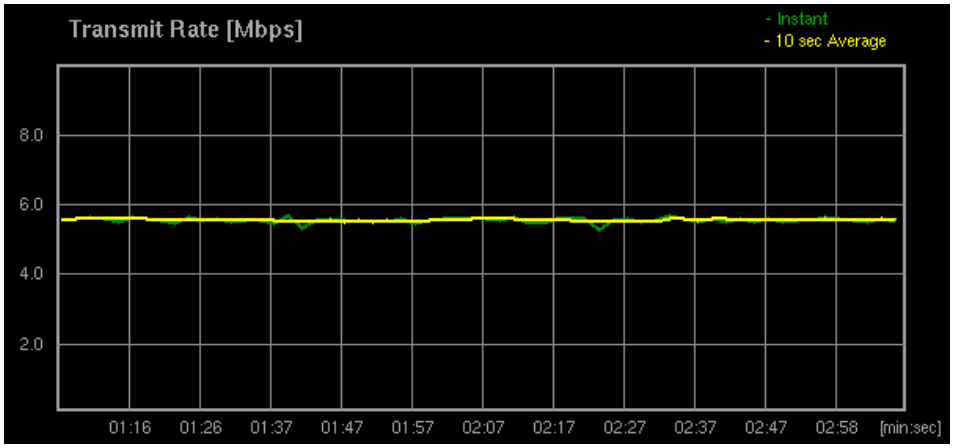
- Transmit Rate
- Receive Rate
- Packet Loss
- Queue Statistics

Data is collected and the graphs are refreshed every two seconds.

Note:
At any time, touching **done** will bring back the initial call screen.

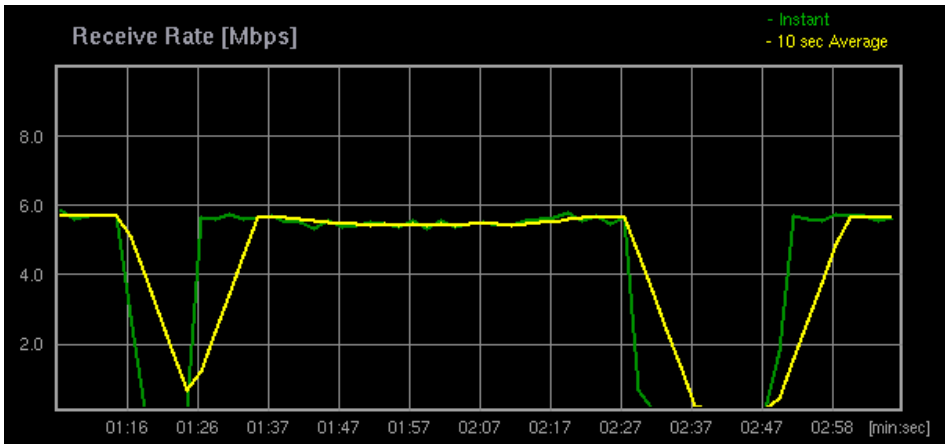
Transmit Rate

The top-left graph displays the transmit rate in Mbps. The graph encompasses a plot for instantaneous values as well as a plot representing 10 second averages. The plots reflect the combined rate of all users connected to the call.



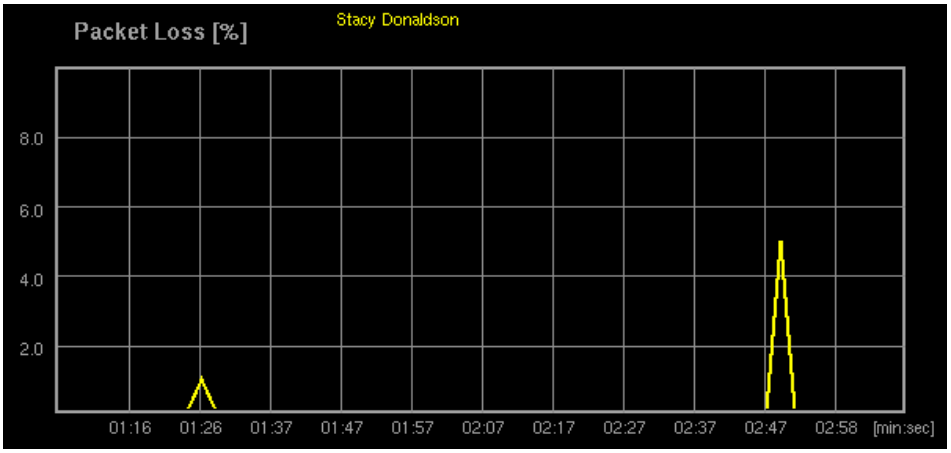
Receive Rate

The bottom-left graph displays the receive rate in Mbps. The graph encompasses a plot for instantaneous values as well as a plot representing 10 second averages. The plots reflect the combined rate of all users connected to the call.



Packet Loss

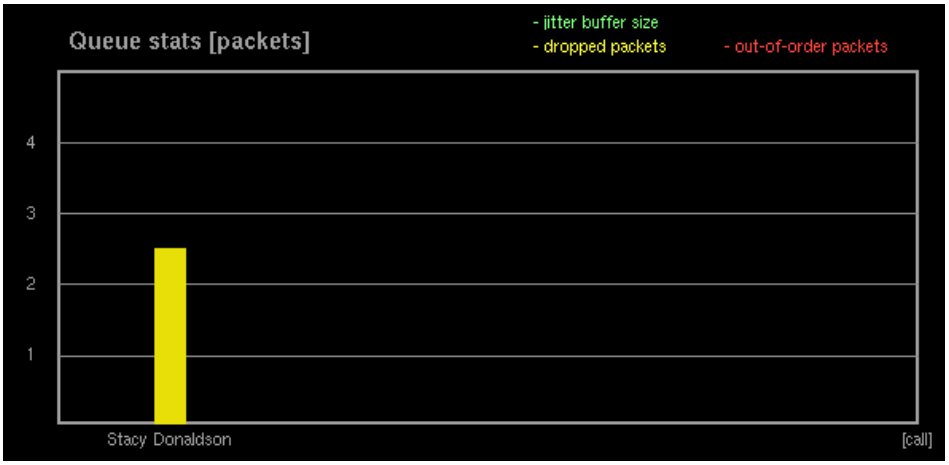
The top-right graph displays packet loss in %. The plotted values reflect the packet loss encountered by respective users participating in the call.



Queue Statistics

The bottom-right graph displays the following queue statistics:

- Jitter buffer size for the channel
- Number of out-of-order packets for the channel
- Number of dropped packets for the channel



Note:

Dropped packets do not affect the packet loss statistics as the packets are intentionally dropped after they are received.

Details

Touching **Details** while on the Graphic Status page will display the information listed in the idle Status page as well as information related to the following additional categories:

- Network Stats - Audio
  - Displays details about the audio transmit and receive channels including packet statistics, bitrate data, and packet/stream type.
- Network Stats - Video
  - Displays details about the video transmit and receive channels including packet statistics, bitrate data, and packet/stream type.

For more information on the idle status page, see Status on page 6-1.

On-Screen Connection Quality Alarms

Poor Network Performance

When poor network performance is experienced during a call on the BluStar 8000i or BluStar for Conference Room, the following alert is displayed on screen:

Touching the on-screen alert will automatically display the graphic status page. For more information on the graphic status page, see Graphic Status Page on page 6-3.

Very Poor Network Performance

When very poor network performance is experienced during a call on the BluStar 8000i or BluStar for Conference Room, the following alert is displayed on screen:

Touching the on-screen alert will automatically display the graphic status page. For more information on the graphic status page, see Graphic Status Page on page 6-3.

Configuration parameters are available allowing administrators to set the thresholds of how much packet loss occurs before displaying the above alerts.

To Configure On-Screen Connection Quality Alarms

Use the following procedure to configure the on-screen connection quality alarms:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, On-Screen Connection Quality Alarms on page A-100.

Syslog Settings

Syslog is a administration logging standard, whereby messages can be logged by facility and severity. Administrators can access and configure Syslog features on the BluStar devices. Syslog parameters have been implemented and can be configured for the following log-related items:

- Syslog location
- System-wide logging
- SIP stack logging
- Debug logging

Syslog Location

Using the configuration files, administrators can specify the save location of the log files used for troubleshooting purposes.

The following parameters can be edited to configure the Syslog location settings:

Parameters in Configuration Files	Description
log server ip	Specifies the log server IP address for which to save system log files for troubleshooting purposes. For example, log server ip: 192.168.3.2
log server port	Specifies the log server IP port to use to save log files for troubleshooting purposes. For example, log server port: 514

To Configure Syslog Location Settings:

Use the following procedure to configure the Syslog location settings.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Syslog Settings on page A-101.

System-Wide Logging

The following parameters can be edited to configure the system-wide log settings. These parameters must be prefaced by the term "BluStar Settings:".

Parameters in Configuration Files	Description
LogLevel	Sets the baseline log level for all of the modules. Individual modules will use the higher of this parameter of their own specific setting. For example, BluStar Settings: LogLevel=2
WriteToFlag	A mask that controls the data path(s) for the logging data. For example, BluStar Settings: WriteToFlag=0

To Configure System-Wide Log Settings:

Use the following procedure to configure the system-wide log settings:

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Syslog Settings on page A-101.

SIP Stack Logging

The following parameters can be edited to configure the SIP stack log settings. These parameters must be prefaced by the term "BluStar Settings:"

Parameters in Configuration Files	Description
VSipServer_LogLevel	Sets the SIP stack log level. For example, BluStar Settings: VSipServer_LogLevel=5
VSipServer_WriteToFlag	A mask that controls the data path(s) for the SIP stack logging data. For example, BluStar Settings: VSipServer_WriteToFlag=1

To Configure the SIP Stack Log Settings:

Use the following procedure to configure the SIP stack log settings.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Syslog Settings on page A-101.

Debug Logging

The following parameters can be edited to configure the debug log settings. These parameters must be prefaced by the term "BluStar Settings:"

Parameters in Configuration Files	Description
DBG_Modules	Allows for enhanced severity filtering of log calls for specific debug modules. For example, BluStar Settings: DBG_Modules=SESN, CALL
DBG_LogLevel	Sets the debug log level. **Note:** The debug log level must be less than or equal to the system-wide log level for the debug module logging to output. For example, BluStar Settings: DBG_LogLevel=1
DBG_WriteToFlag	A mask that controls the data path(s) for the debug logging data. For example, BluStar Settings: DBG_WriteToFlag=1

To Configure the Debug Log Settings:

Use the following procedure to configure the debug log settings.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Syslog Settings on page A-101.

Troubleshooting Solutions

How do I restart the BluStar?

You can restart the BluStar 8000i or BluStar for Conference Room from the App menu. From the log off screen, users have the option to do the following:

- Log Off
- Log Off and Restart
- Log Off and Shut Down
- Safe Shutdown for Unit Relocation
- Cancel

To Log Off:

1. Select the **App Menu** button.
2. Select the **Log Off** button.
3. Select either:
   - **Log Off**
   - **Log Off and Restart**
   - **Log Off and Shut down**
   - **Safe Shutdown for Unit Relocation**

How do I set the BluStar device to factory default?

You can set the BluStar device to its factory default setting on the device's UI. Factory default settings are the settings that reside on the device after it has left the factory. Factory default settings on the BluStar device set factory defaults for all of the settings in the aastra.cfg, <model>.cfg, and <mac>.cfg files.

Note:
Resetting the device to factory default will not change the <user>.cfg.

To Reset to Factory Defaults:

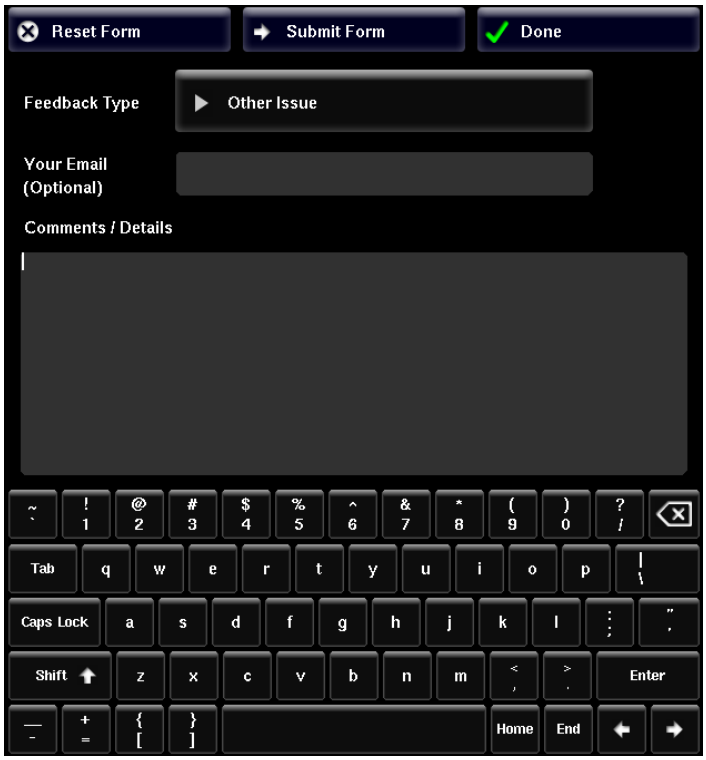
1. Select **Reset to Factory Defaults** button.
   The following message appears: "*Do you really want to log off and reset to factory defaults*?"
2. Select either **Reset** or **Cancel.**

How can I send comments or report a bug concerning my BluStar device?

A feedback application is available in the App menu that you can use to send comments and/or report issues directly to Aastra Telecom from your BluStar device. The feedback application can be enabled or disabled in the configuration files.

To Send Comments or Report Issues Using the Feedback Application:

1. Select the **App Menu** button
   OR
   the **hot** key (on the BluStar 8000i).
   The App menu button is outlined in green, indicating that it is opened.
2. Select the **Feedback** button.



3. Select the **Feedback Type** field and select the general category of feedback you wish to send.
   Note:
   If the applicable general category is not listed, select **Other**.
4. Select the **Your Email** field and enter in your email address by using the keyboard.
   Note:
   Including your email address is optional.
5. Select the **Comment/Details** field and enter any comments or issue details by using the keyboard. If you are reporting an issue, please state precisely all relevant information pertaining to the issue.
   Note:
   At any time, touching the **Reset Form** button will discard all changes and revert the form back to its original state.
6. Select **Submit Form** if no further changes are needed.
7. Select **Done** to return to your home screen.

To Configure the Feedback Application:

Use the following procedure to configure the feedback application.

Configuration Files

For the specific parameter(s) you can set in the configuration files, see Appendix A, the section, Feedback Application Settings on page A-106.

Appendix A
Parameters

Introduction

This appendix describes the parameters you can set in the configuration files for the BluStar 8000i and BluStar for Conference Room. The configuration files include aastra.cfg, <model>.cfg, <mac>.cfg, and <user>.cfg.

Topics

This appendix covers the following topics:

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Network Settings	page A-4
ToS/QoS/Diffserv QoS Parameters	page A-8
Virtual Local Area Network (VLAN) Settings	page A-9
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Rport Setting	page A-21
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Advanced SIP Settings	page A-26
RTP Settings	page A-28
Directory Settings	page A-31
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Microsoft Exchange Contact Settings	page A-46
LDAP Directory/Exchange Contacts Update Interval	page A-51
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BLF Subscription Period Settings	page A-82
Directed Call Pickup	page A-82
BluStar Server Interoperability Settings	page A-83
Visual Enhancement Settings	page A-84
XML Settings	page A-84
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Syslog Settings	page A-101
Feedback Application Settings	page A-106

Setting Parameters in Configuration Files

You can set specific configuration parameters in the configuration files for configuring the BluStar 8000i and BluStar for Conference Room. The **aastra.cfg**, **<model>.cfg**, **<mac>.cfg**, and **<user>.cfg** files are stored on the server.

Note:
The <user>_local.cfg is also stored on the server but the file must never be edited manually. All user parameters that need to be configured should be defined and edited in the <user>.cfg file only.

The **aastra.cfg** file contains configuration information about all BluStar 8000i, BluStar for Conference Room, and/or all 9000i and 6700i series SIP IP phone devices.

The **<model>.cfg** file contains model specific information. Currently the following two <model>.cfg files can be used (the filenames are case sensitive):

- 8000i.cfg - BluStar 8000i Desktop Media Phone
- 8000icr.cfg - BluStar for Conference Room

The **<mac>.cfg** file stores configuration settings specific to the BluStar with that MAC address, and has the parameter "**update url**" that downloads software onto the BluStar device.

The **<user>.cfg** file contains read-only server-related user configuration information that is not configurable through the BluStar device.

Notes:
- The majority of configuration parameters that you enter in the configuration files are **NOT** case sensitive, however language values (e.g. French) **ARE** case sensitive.
- All URL parameters containing special characters found within applicable configuration files must be URL-encoded. Examples of applicable special characters can be found in the table in On-Screen Keyboard on page 1-16. Please refer to RFC3986 for further details.

Reference

For information about configuration file precedence, see Configuration Precedence on page 2-2.

Operational, Basic Parameters

The following sections provide the configuration parameters you can configure on the BluStar 8000i and BluStar for Conference Room. Each parameter table includes the name of the parameter, a description, the format, default value, range, and example. The table also provides the method for which the parameters can be configured (e.g. aastra.cfg, <model>.cfg, <mac>.cfg, or <user>.cfg).

Network Settings

Parameter – *dhcp*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables DHCP. Enabling DHCP populates the required network information. The DHCP server serves the network information that the BluStar device requires. If the BluStar device is unable to get any required information, then you must enter it manually. DHCP populates the following network information: IP Address, Subnet Mask, Gateway, Domain Name Servers (DNS), HTTP HTTPS, TFTP, and FTP servers, and Timer Servers.
Format	Integer
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	dhcp: 1

Parameter – *ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	This parameter assigns a static IP address to the BluStar device. For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address
Default Value	0.0.0.0
Range	NA
Example	ip: 192.168.0.25

Parameter – *subnet mask*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Subnet mask defines the IP address range local to the BluStar device. For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address
Default Value	255.255.255.0
Range	NA
Example	subnet mask: 255.255.255.224

Parameter – *default gateway*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The IP address of the network's gateway or default router IP address. For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address
Default Value	1.0.0.1
Range	NA
Example	default gateway: 192.168.0.1

Parameter – *dns1*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Primary domain name server IP address. For any of the IP address settings on the BluStar device, a domain name value can be entered instead of an IP address. With the help of the domain name servers the domain names for such parameters can then be resolved to their corresponding IP addresses. For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address
Default Value	0.0.0.0
Range	NA
Example	dns1: 192.168.0.5

Parameter – *dns2*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	A service that translates domain names into IP addresses. To assign static DNS addresses, disable DHCP. For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address
Default Value	0.0.0.0
Range	NA
Example	dns2: 192.168.0.6

Parameter – *ethernet port 0*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The send (TX) and receive (RX) method to use on Ethernet port 0 to transmit and receive data over the LAN.
Format	Integer
Default Value	0
Range	0-4 0 (auto-negotiate) 1 (full-duplex, 10Mbps) 2 (full-duplex, 100Mbps) 3 (half-duplex, 10Mbps) 4 (half-duplex, 100Mbps)
Example	ethernet port 0: 3

Parameter – *time server disabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables the time server. This parameter affects the **"time server1"**, **"time server2"**, and "**time server3"** parameters. Setting this parameter to '0' allows the use of the configured Time Server(s). Setting this parameter to '1' prevents the use of the configured Time Server(s). For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	Integer
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	time server disabled: 0

Parameter – *time server1*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The primary time server's IP address or qualified domain name. If the time server is enabled, the value for "**time server1**" will be used to request the time from. For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address or qualified domain name
Default Value	0.0.0.0
Range	NA
Example	time server1: 192.168.0.5

Parameter – *time server2*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The secondary time server's IP address or qualified domain name. If the time server is enabled and the primary time server is not configured or cannot be accessed, the value for "**time server2**" will be used to request the time from.
Format	IP address or qualified domain name
Default Value	0.0.0.0
Range	NA
Example	time server2: 192.168.0.5

Parameter – *time server3*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The tertiary time server's IP address or qualified domain name. If the time server is enabled and the primary and secondary time servers are not configured or cannot be accessed, the value for "**time server3**" will be used to request the time from.
Format	IP address or qualified domain name
Default Value	0.0.0.0
Range	NA
Example	time server3: 192.168.0.5

Parameter – *internet proxy*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the URI of the HTTP Internet proxy used by respective BluStar device applications to gain access to the Internet.
Format	http://[user]:[password]@[proxy IP address or FQDN]:[port]
Default Value	N/A (default port = 1080)
Range	N/A
Example	internet proxy: http://proxy.aastra.com internet proxy: http://aastra:aastra@proxy.aastra.com:8080

ToS/QoS/Diffserv QoS Parameters

Parameter – *tos sip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The Differentiated Services Code Point (DSCP) for SIP packets.
Format	Integer
Default Value	46
Range	0-63
Example	tos sip: 3

Parameter – *tos rtp*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The Differentiated Services Code Point (DSCP) for audio RTP packets.
Format	Integer
Default Value	46
Range	0-63
Example	tos rtp: 2

Parameter – *tos rtp video*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The Differentiated Services Code Point (DSCP) for video RTP packets.
Format	Integer
Default Value	46
Range	0-63
Example	tos rtp video: 4

Virtual Local Area Network (VLAN) Settings

Global Parameters

Parameter – *tagging enabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables VLAN on the BluStar device. This is a global setting.
Format	Boolean
Default Value	0 (Disabled)
Range	0 (Disabled) 1 (Enabled)
Example	tagging enabled: 1

LAN Port (Ethernet Port 0) Parameters

Parameter – *vlan id*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to configure a VLAN ID that associates with the physical Ethernet Port 0 (LAN port).
Format	Integer
Default Value	1
Range	1 to 4094
Example	vlan id: 300

Parameter – *qos eth port 0 priority*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the priority value used for all traffic (e.g. SIP, RTP, etc.) on the physical Ethernet Port 0.
Format	Integer
Default Value	5
Range	0 to 7
Example	qos eth port 0 priority: 2

PC Port (Ethernet Port 1) Parameters

Parameter – *vlan id port 1*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to configure a VLAN ID that associates with the physical Ethernet Port 1 (PC port).
Format	Integer
Default Value	1
Range	1 to 4094
Example	vlan id port 1: 3

Parameter – *qos eth port 1 priority*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the priority value used for passing VLAN packets through to a PC via Port 1.
Format	Integer
Default Value	0
Range	0 to 7
Example	qos eth port 1 priority: 3

DHCP Option Settings

Option 12

Parameter– *hostname*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the hostname DHCP Option 12 that the BluStar device sends with the DHCP Request packet. If you change this parameter, you must restart the BluStar device for the change to take affect.
Format	String
Default Value	[<model><MAC IP Address>]
Range	Up to 64 alpha-numeric characters The value for this parameter can also be a fully qualified domain name.
Example	hostname: aastra4

Option 77

Parameter– *dhcp userclass*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the User Class DHCP Option 77 that the BluStar device sends to the configuration server with the DHCP Request packet. If you specify a value for this parameter, you must restart your BluStar device for the change to take affect. Any change in its value during start-up results in an automatic reboot.
Format	String
Default Value	“”
Range	Up to 64 alpha-numeric characters
Example	dhcp userclass: admin

Option 132 (802.1P VLAN ID)

Parameter– *dhcp option 132 vlan id enabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables the BluStar device to assign the VLAN ID using Option 132 of the DHCP protocol.
Format	Integer
Default Value	1 (Enabled)
Range	0 - 1 0 (Disabled) 1 (Enabled)
Example	dhcp option 132 vlan id enabled: 0

Options 159 and 160 - DHCP Option Override

Parameter– *dhcp config option override*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The value specified for this parameter overrides the precedence order for determining a configuration server. **Note:** You must restart the BluStar for this parameter to take affect.
Format	Integer
Default Value	0 (any - no override - uses normal precedence order of 43, 160, 159, 66)
Range	-1 (disabled - ignores all DHCP configuration options (43, 66, 159, 160)) 0 (any) 43 66 159 160
Example	dhcp config option override: 66

Configuration Server Settings

Parameter – *pbx mode*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	This parameter specifies the BluStar device mode. **Note:** If configuration server details are being set by the DHCP server, ensure that the locked parameter "**!pbx mode: 1**" is added to the aastra.cfg file for SIP Call Server mode. As the default server type is locally set to BluStar Application Server on the BluStar device and the local device settings take precedence over the configuration files, failure to lock the "**pbx mode**" parameter may cause the BluStar device to boot into BluStar Application Server mode upon a restart.
Format	Integer
Default Value	0 (BAS mode)
Range	0-1 0 (BAS mode) 1 (SIP Call Server mode)
Example	!pbx mode: 1

Parameter – *download protocol*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Protocol to use for downloading the configuration files to the BluStar device.
Format	Text
Default Value	FTP
Range	TFTP FTP HTTP HTTPS
Example	download protocol: http

Parameter – *download timeout*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the overall timeout (in seconds) for downloading the configuration files (aastra.cfg, <model>.cfg, and <mac>.cfg).
Format	Integer
Default Value	30 (seconds)
Range	Minimum value is 10 seconds.
Example	download timeout: 40

Parameter – *download connect timeout*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Complements the "download timeout" parameter. Whereas the "download timeout" parameter is used to specify the timeout for downloading the configuration files, the "download connect timeout" parameter specifies the amount of time allowed (in seconds) for the BluStar device to connect to the configuration server.
Format	Integer
Default Value	15 (seconds)
Range	Minimum value is 5 seconds.
Example	download connect timeout: 20

Parameter – *update url*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The url to upgrade the BluStar device software. **Note:** The software upgrade process will be initiated on the first reboot after the parameter has been modified.
Format	url
Default Value	NA
Range	File transfer protocol can be FTP, HTTP, or HTTPS
Example	update url: ftp://10.55.102.56/aastracfg

Parameter – *user config url*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The url to load the user configuration files.
Format	url
Default Value	NA
Range	File transfer protocol can be TFTP, FTP, HTTP, or HTTPS **Note:** The "user config url" parameter supports tftp, ftp, http, https, however only ftp, http, and https can be authenticated.
Example	user config url: http://10.55.102.56/aastracfg/usercfg

Parameter – *enable user configuration server redirection*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used to enable HTTP(S) redirection when downloading the user.cfg and downloading/uploading the user_local.cfg files in such cases where the files are statically configured (in the aastra.cfg, <mac>.cfg, or <model>.cfg files) to a single location, but the user configuration files are in fact located on the SIP call server node hosting the subscription. If the parameter is disabled in such cases, the BluStar device cannot properly retrieve the user configuration files.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Example	enable user configuration server redirection: 1

Parameter – *telephony integration url*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The url (http or https) the BluStar device calls to perform SIP Call Server integration. This is done during the login sequence and later to activate/deactivate server side feature integration such as DND, Call Forward, etc.
Format	String
Default Value	NA
Range	NA
Example	telephony integration url: http://myserver.com/integration.php

Parameter – *telephony integration use login credentials*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	By default BluStar device uses the SIP credentials to authenticate (digest method) to the SIP Call Server integration server. Enabling this configuration parameter makes BluStar device use the user login/password instead.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Example	telephony integration use login credentials: 1

Parameter – *telephony integration needs sip registration*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used by the telephony integration API to indicate to the software if SIP registration is needed before sending a user command via the API. When enabled, the BluStar device checks the extension registration status before sending an API command. If the extension is not registered, an error message is displayed.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Example	telephony integration needs sip registration: 1

Parameter – *tftp server*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The TFTP server's IP address. If DHCP is enabled and the DHCP server provides the information, this field is automatically populated. Use this parameter to change the IP address or domain name of the TFTP server. This will become effective after this configuration file has been downloaded into the BluStar device. **Note:** For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address or qualified domain name
Default Value	0.0.0.0
Range	NA
Example	tftp server: 192.168.0.130

Parameter – *tftp port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the path name for which the configuration files reside on the TFTP server for downloading to the BluStar device. **Note:** Enter the path name in the form folderX\folderX. For example, blustar8000i\configfiles.
Format	String
Default Value	NA
Range	Up to 64 alphanumeric characters
Example	tftp path: configs\tftp

Parameter – *ftp server*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The FTP server's IP address or network host name. This will become effective after this configuration file has been downloaded into the BluStar device. **Optional**: You can also assign a user name and password for access to the FTP server. See the following parameters for setting user name and password. **Note:** For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	NA
Example	ftp server: 192.168.0.131

Parameter – *ftp path*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies a path name for which the configuration files reside on an FTP server for downloading to the BluStar device. **Note:** Enter the path name in the form *folderX\folderX\folderX*. For example, BluStar8000i\BluStarconfigfiles.
Format	String
Default Value	NA
Range	Up to 64 alphanumeric characters
Example	ftp path: configs\ftp

Parameter – *ftp username*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The user name to enter for accessing the FTP server. This will become effective after this configuration file has been downloaded into the BluStar device. **Note:** The BluStar device supports user names containing dots (“.”).
Format	Text
Default Value	NA
Range	Up to 63 alphanumeric characters
Example	ftp username: aastraconfig

Parameter – *ftp password*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The password to enter for accessing the FTP server. This will become effective after this configuration file has been downloaded into the BluStar device.
Format	Text
Default Value	NA
Range	Up to 63 alphanumeric characters
Example	ftp password: 1234

Parameter – *http server*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The HTTP server's IP address. This will become effective after this configuration file has been downloaded into the BluStar device. **Optional**: You can also assign an HTTP relative path to the HTTP server. See the next parameter (http path). **Note:** For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	NA
Example	http server: 192.168.0.132

Parameter – *http path*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The HTTP path name to enter. If the BluStar device's configuration and firmware files are located in a sub-directory beneath the server's HTTP root directory, the relative path to that sub-directory should be entered in this field.
Format	dir/dir/dir
Default Value	NA
Range	Up to 63 alphanumeric characters
Example	http path: blustar/1

Parameter – *http port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the HTTP port that the server uses to load the configuration to the BluStar device over HTTP. **Note:** For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	Integer
Default Value	80
Range	1 through 65535
Example	http port: 1025

Parameter – *https server*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The HTTPS server's IP address. This will become effective after this configuration file has been downloaded into the BluStar device. **Optional**: You can also assign an HTTPS relative path to the HTTPS server. See the next parameter (https path). **Note:** For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	IP address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	NA
Example	https server: 192.168.0.143

Parameter – *https path*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The HTTPS path name to enter. If the BluStar device's configuration and firmware files are located in a sub-directory beneath the server's HTTPS root directory, the relative path to that sub-directory should be entered in this field.
Format	dir/dir/dir
Default Value	NA
Range	Up to 63 alphanumeric characters
Example	https path: blustar/1

Parameter – *https port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the HTTPS port that the server uses to load the configuration to the BluStar device over HTTPS. **Note:** For DHCP to automatically populate this parameter, your DHCP server must support Option 66.
Format	Integer
Default Value	443
Range	1 through 65535
Example	https port: 1025

Parameter – *auto resync mode*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Determines whether the configuration server automatically updates the configuration files or disables automatic updates. This parameter works with TFTP, FTP, HTTP and HTTPS servers. Valid values are: None (0) - Disable auto-resync Configuration Files (1) - Updates the configuration files on the BluStar device automatically at the specified time if the files on the server have changed. **Notes:** • Any changes made using the BluStar device are not overwritten by an auto-resync update. Auto-resync affects the configuration files only. • The resync time is based on the local time of the BluStar device. • If the BluStar device is in use (not idle) at the time of the resync check, the reboot occurs when the BluStar device becomes idle. • The automatic update feature works with both encrypted and plain text configuration files.
Format	Integer
Default Value	0
Range	0-1 0 (none) 1 (configuration files only)
Example	auto resync mode: 1

Parameter – *auto resync time*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Sets the time of day in a 24-hour period for the BluStar device to be automatically updated. This parameter works with TFTP, FTP, HTTP and HTTPS servers. **Notes:** • The resync time is based on the local time of the BluStar device. • The value of 00:00 is 12:00 A.M. • When entering a value for this parameter using the configuration files, the value can be entered using minute values from 00 to 59 (for example, the auto resync time can be entered as 02:56). • Auto-Resync adds up to 15 minutes random time to the configured time. For example, if the auto resync time parameter is set to 02:00, the event takes place any time between 02:00 and 02:15. • When the language on the BluStar device is set to French or Spanish, you must enter the time in the format "00h00" (configuration files only).
Format	String hh:mm 00h00 (for French and Spanish configuration files)
Default Value	00:00
Range	00:00 to 23:59
Example	auto resync time: 22:30

Parameter – *auto resync max delay*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum time, in minutes, the BluStar device waits past the scheduled time before starting a checksync.
Format	Integer
Default Value	0
Range	0-1439
Example	auto resync max delay: 20

Rport Setting

Parameter – *sip rport*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Allows you to enable (1) or disable (0) the use of Rport on the BluStar device. "Rport" in RFC 3581, allows a client to request that the server send the response back to the source IP address **and** the port from which the request came. Configuring the Rport parameter is recommended for clients behind a Network Address Translation (NAT) or firewall.
Format	Boolean
Default Value	0
Range	0 (disable) 1 (enable)
Example	sip rport: 1

SIP Settings

SIP Authentication Settings

Parameter – *sip auth name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used in the user name field of the Authorization header field of the *SIP REGISTER* request.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip auth name: 5553456

Parameter – *sip display name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used in the display name field of the *From* SIP header field. Some IP PBX systems use this as the caller's ID and some may overwrite this with the string that is set at the PBX system.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip display name: Joe Smith

Parameter – *sip screen name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used to display text on the screen of the BluStar device. You may want to set this parameter to display the user's name of the BluStar device.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip screen name: Joe Smith

Parameter – *sip screen name 2*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used to display text on a second line on the screen of the BluStar device.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip screen name 2: Lab Phone

Parameter – *sip user name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	User name used in the name field of the *SIP URI* for the BluStar device and for registering the BluStar device at the registrar. **Note:** The BluStar device support user names containing dots (“.”).
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip user name: 1010

Parameter – *sip password*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The password that will be used to register at the registrar.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip password: 12345

Parameter – *sip mode*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Allows you to configure the mode of the line. Applicable values are: **Generic** - Normal line **BroadSoft SCA** - Shared Call/Line Appearances (SCA) line for BroadWorks network (call activity can go to more than one BluStar device) **BLA** - Bridged Line Appearance (BLA) line.
Format	Integer
Default Value	0
Range	0-3 0 - Generic 1 - BroadSoft SCA 2 - (reserved) 3 - BLA
Example	sip mode: 2

Parameter – *dash delimiter*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Enables the (-) to visually separate the dial number and to make the number easy to recognize and remember. For example: 5551212: Local phone number with no area code and no dash delimiter 555-1212: Local phone number with no area code and dash delimiter This parameter can be applied in the <user>.cfg file for user specific settings, or in the aastra.cfg or <mac>.cfg files for device specific settings.
Format	Boolean
Default Value	0 (No)
Range	0-1 0 (Disabled) 1 (Enabled)
Example	dash delimiter: 1

SIP Network Settings

Parameter – *sip proxy ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The IP address of the SIP proxy server for which the BluStar device uses to send all SIP requests. A SIP proxy is a server that initiates and forwards requests generated by the BluStar device to the targeted user.
Format	IP address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	Up to 64 alphanumeric characters.
Example	sip proxy ip: 192.168.0.101

Parameter – *sip proxy port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The proxy server's port number.
Format	Integer
Default Value	0
Range	NA
Example	sip proxy port: 5060

Parameter – *sip outbound proxy*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	This is the address of the outbound proxy server. All SIP messages originating from the BluStar device are sent to this server. For example, if you have a Session Border Controller in your network, then you would normally set its address here.
Format	IP Address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	NA
Example	sip outbound proxy: 10.42.23.13

Parameter – *sip outbound proxy port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The proxy port on the proxy server to which the BluStar device sends all SIP messages.
Format	Integer
Default Value	0
Range	NA
Example	sip outbound proxy port: 5060

Parameter – *sip registrar ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The address of the registrar for which the BluStar device uses to send REGISTER requests. A SIP registrar is a server that maintains the location information of the BluStar device. A value of 0.0.0.0 disables registration. However, the BluStar device is still active and you can dial using the username@ip address of the BluStar device.
Format	IP address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	NA
Example	sip registrar ip: 192.168.0.101

Parameter – *sip registrar port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The registrar's port number.
Format	Integer
Default Value	0
Range	NA
Example	sip registrar port: 5060

Parameter – *sip registration period*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The requested registration period, in seconds, from the registrar.
Format	Integer
Default Value	0
Range	0 - 2147483647
Example	sip registration period: 3600

Shared Call Appearance (SCA) Call Bridging

Parameter – *sip sca bridging*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables/disables SCA bridging on the device-side on a global basis. **Note:** You must restart the device after setting a value for this parameter.
Format	Boolean
Default Value	0
Range	0 (disabled) 1 (enabled)
Example	sip sca bridging: 1

Advanced SIP Settings

Parameter – *sip explicit mwi subscription*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	If the BluStar device has a message waiting subscription with the Service Provider, a Message Waiting Indicator (MWI) (LED or display icon) tells the user there is a message on the BluStar device.
Format	Boolean
Default Value	0
Range	0-1 0 (disable) 1 (enable)
Example	sip explicit mwi subscription: 1

Parameter – *sip explicit mwi subscription period*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The requested duration, in seconds, before the MWI subscription times out. The BluStar device re-subscribes to MWI before the subscription period ends.
Format	Integer
Default Value	86400
Range	30 - 2147483647
Example	sip explicit mwi subscription period: 30

Parameter – *sip send mac*	Configuration Files – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Adds an "Aastra-Mac:" header to the SIP REGISTER messages sent from the BluStar device to the call server, where the value is the MAC address of the BluStar device.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	sip send mac: 1

Parameter – *sip session timer*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The time, in seconds, that the BluStar device uses to send periodic re-INVITE requests to keep a session alive. The proxy uses these re-INVITE requests to maintain the status' of the connected sessions. See RFC4028 for details.
Format	Integer
Default Value	0
Range	NA
Example	sip session timer: 30

Parameter – *sip T1 timer*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	This timer is a SIP transaction layer timer defined in RFC 3261. Timer 1 is an estimate, in milliseconds, of the round-trip time (RTT).
Format	Integer
Default Value	500
Range	NA
Example	sip T1 timer: 600

Parameter – *sip T2 timer*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	This timer is a SIP transaction layer timer defined in RFC 3261. Timer 2 represents the amount of time, in milliseconds, a non-INVITE server transaction takes to respond to a request.
Format	Integer
Default Value	0
Range	NA
Example	sip T2 timer: 8

Parameter – *sip transaction timer*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The amount of time, in milliseconds that the BluStar device allows the callserver (registrar/proxy) to respond to SIP messages that it sends. If the BluStar device does not receive a response in the amount of time designated for this parameter, the BluStar device assumes the message has timed out.
Format	Integer
Default Value	4000
Range	4000 to 64000
Example	sip transaction timer: 6000

RTP Settings

Parameter – *sip rtp port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Indicates the port through which the audio RTP packets are sent. The RTP port is used for sending DTMF tones and for the audio stream. Your network administrator may close some ports for security reasons. You may want to use this parameter to send RTP data using a different port.
Format	Integer
Default Value	3000
Range	N/A
Example	sip rtp port: 4000

Parameter – *sip rtp video port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Indicates the port through which the video RTP packets are sent. The RTP video port is used for sending the video stream. Your network administrator may close some ports for security reasons. You may want to use this parameter to send RTP video data using a different port.
Format	Integer
Default Value	30000
Range	N/A
Example	sip rtp video port: 31000

Parameter – *sip out-of-band dtmf*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables out-of-band DTMF. Enabling this parameter forces the BluStar device to use out-of-band DTMF according to RFC2833. **Note:** See "Out-of-Band DTMF and DTMF Method on page 3-16" for DTMF behavior information when this parameter is used in conjunction with the "sip dtmf method" parameter.
Format	Boolean
Default Value	1
Range	0-1 0 (Inband) 1 (Out-of-band (RFC2833))
Example	sip out-of-band dtmf: 0

Parameter – *sip dtmf method*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Sets dual-tone multifrequency (DTMF) method to use on the BluStar device. **Note:** See "Out-of-Band DTMF and DTMF Method on page 3-16" for DTMF behavior information when this parameter is used in conjunction with the "sip out-of-band dtmf" parameter.
Format	Boolean
Default Value	0 (RTP)
Range	0-2 0 (RTP) 1 (SIP info) 2 (both)
Example	sip dtmf method: 1

Parameter – *sip mode*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the degree to which should be utilized on the respective BluStar device as per the following levels: If set to 0, then disable . If set to 1, then calls are preferred (i.e. allow secure calls). If set to 2, then only calls are generated/accepted (i.e. require secure calls).
Format	Integer
Default Value	0 (disabled)
Range	0 (disabled) 1 (Allow secure calls) 2 (Require secure calls)
Example	sip mode: 1

Directory Settings

Parameter – *directory 1*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The name of the global directory list that you can download from the configuration server. **Notes:** You can use this parameter in three ways: • To download no directory • To download a directory from the original configuration server • To download a directory from another specified server To download a specific file, the string value MUST HAVE A FILENAME at the end of the string. For example: directory 1: ftp://10.30.102.158/path/global.csv where "path" is the directory and "global.csv" is the filename. If you do not specify a filename, the download fails. See examples for each below. **Note:** The .csv file must be UTF-8 encoded in order for the BluStar device to properly manage any accented characters within the entries.
Format	Alphanumeric characters
Default Value	NA
Range	NA
Example	The following example downloads no directory: directory 1: The following example downloads a company global directory from the original configuration server: directory 1: global.csv The following example downloads a company global directory file from the specified server in the "path" directory: directory 1: ftp://10.30.102.158/path/global.csv

Parameter – *directory 2*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The name of a user directory list that you can download from the configuration server. You can use this parameter in three ways: • To download no directory • To download a directory from the original configuration server • To download a directory from another specified server To download a specific file, the string value MUST HAVE A FILENAME at the end of the string. For example: directory 1: ftp://10.30.102.158/path/user.csv where "path" is the directory and "user.csv" is the filename. If you do not specify a filename, the download fails. See examples for each below. **Note:** The .csv file must be UTF-8 encoded in order for the BluStar device to properly manage any accented characters within the entries.
Format	Alphanumeric characters
Default Value	NA
Range	NA
Example	The following example downloads no directory: directory 2: The following example downloads a company directory from the original configuration server: directory 2: joe.csv The following example downloads a company directory file from the specified server in the "path" directory: directory 2: ftp://10.30.102.158/path/joe.csv

Parameter – *contact dynamic search threshold*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	This parameter indicates the threshold value where the contact search is no longer dynamic. If the LDAP or Exchange directory holds more records than the configured value, the user must select the search button in order to trigger the search within the contacts.
Format	Integer
Default Value	5000
Range	0-1000000
Example	contact dynamic search threshold: 10000

Call History Settings

Parameter – *callers list disabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables call history. If this parameter is set to '0', the history screen can be accessed by all users. If this parameter is set to '1', the BluStar device does not save any caller information to the call history.
Format	Boolean
Default Value	0 (false)
Range	0-1 0 (false) 1 (true)
Example	callers list disabled: 1

Missed Calls Indicator Settings

Parameter – *missed calls indicator disabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables the missed calls indicator. If the "missed calls indicator disabled" parameter is set to 0, the indicator increments as unanswered calls come into the BluStar device. If the "missed calls indicator disabled" parameter is set to 1, the indicator is disabled and will NOT increment as unanswered calls come into the BluStar device.
Format	Boolean
Default Value	0 (false)
Range	0-1 0 (false) 1 (true)
Example	missed calls indicator disabled: 1

Basic LDAP Settings

Parameter – *ldap name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the name of the LDAP directory. It is the label that will be displayed in the directory screen to identify the content, usually the company name or "corporate".
Format	String
Default Value	NA
Range	NA
Example	ldap name: acme

Parameter – *ldap server*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP server hostname or IP address. This parameter handles multiple values, in the format "username:password@ldapserver:port", where: • user name for authentication (optional, if not provided anonymous connection will be used) • password for authentication (optional) • ldapserver is the IP address or name of the LDAP server (mandatory) • port is the LDAP interface port (optional, default is 389)
Format	String (hostname or IP address)
Default Value	NA
Range	NA
Example	ldap server: ldap.company.com (no authentication and using default port 389) ldap server: user:password@ldap.company.com:3268 (authentication and using port 3268)

Parameter – *ldap base dn*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP server base DN. It is the description of the top level of the directory tree. Usually if a company domain is "company.com", the base DN (distinguished name) must be entered under the form "dc=company, dc=com".
Format	String
Default Value	NA
Range	NA
Example	ldap base dn: dc=acme, dc=com (for acme.com)

Parameter – *enable user defined ldap*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	This administrator parameter allows (or disallows) the user to edit his LDAP directory configuration overriding the configuration coming from the configuration server.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	enable user defined ldap: 1

Advanced LDAP Settings

Parameter – *ldap name title attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP name title (e.g. Mr.) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap name title attribute list: title, gender

Parameter – *ldap first name attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP first name (e.g. John) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap first name attribute list: fname, uname

Parameter – *ldap last name attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP last name (e.g. Doe) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap last name attribute list: name, lname

Parameter – *ldap middle name attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP middle name (e.g. Allen) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap middle name attribute list: mname, initial

Parameter – *ldap name suffix attribute*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP name suffix (e.g. Ph.D) for the attribute list. If this parameter contains more than one value, only the first matching value will be picked in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap name suffix attribute: suffix

Parameter – *ldap company attribute list*	**Configuration Files** – astra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP company name (e.g. Aastra) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap company attribute list: organization, bname

Parameter – *ldap job title attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP job title (e.g. Vice President) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap job title attribute list: jtitle, title

Parameter – *ldap business street attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business street (e.g. Snow Blvd.) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business street attribute list: waddress, baddress

Parameter – *ldap business city attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business city (e.g. Concord) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business city attribute list: wcity, bcity

Parameter – *ldap business state attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business state (e.g. Ontario) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business state attribute list: wstate, bstate

Parameter – *ldap business postal code attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business postal code (e.g. L4K 4N9) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business postal code attribute list: bcode, wcode

Parameter – *ldap business country attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business country (e.g. Canada) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business country attribute list: bcountry, wcountry

Parameter – *ldap home street attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP home street (e.g. Internet Blvd.) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap home street attribute list: hstreet, pstreet

Parameter – *ldap home city attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP home city (e.g. Frisco) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap home city attribute list: hcity, pcity

Parameter – *ldap home state attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP home state (e.g. Texas) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap home state attribute list: hstate, pstate

Parameter – *ldap home postal code attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP home postal code (e.g. 75034) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap home postal code attribute list: hcode, pcode

Parameter – *ldap home country attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP home country (e.g. U.S.A) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap home country attribute list: hcountry, pcountry

Parameter – *ldap business phone 1 attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business phone 1 (e.g. 1-905-760-4200) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business phone 1 attribute list: wphone1, bphone1

Parameter – *ldap business phone 2 attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business phone 2 (e.g. 1-905-760-4201) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business phone 2 attribute list: wphone2, bphone2

Parameter – *ldap home phone 1 attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP home phone 1 (e.g. 1-416-468-3266) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap home phone 1 attribute list: hphone1, pphone1

Parameter – *ldap home phone 2 attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP home phone 2 (e.g. 1-416-468-3267) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap home phone 2 attribute list: hphone2, pphone2

Parameter – *ldap mobile phone attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP mobile phone (e.g. 1-416-468-3268) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap mobile phone attribute list: cell, mobile

Parameter – *ldap other phone attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP other phone (e.g. 1-416-468-3269) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap other phone attribute list: otherphone, mphone

Parameter – *ldap business fax attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP business fax (e.g. 1-905-760-4233) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap business fax attribute list: fax, bfax

Parameter – *ldap email 1 attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP email 1 (e.g. john.doe@aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap email 1 attribute list: email1, mail1

Parameter – *ldap email 2 attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP email 2(e.g. john.d@aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap email 2 attribute list: email2, mail2

Parameter – *ldap email 3 attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP email 3 (e.g. j.doe@aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap email 3 attribute list: email3, mail3

Parameter – *ldap web address attribute list*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the LDAP web address (e.g. www.aastra.com) for the attribute list. If this parameter contains more than one value, only the first matching value will be selected in the record.
Format	String, list of attribute names separated by a comma.
Default Value	NA
Range	NA
Example	ldap web address attribute list: web, url

Parameter – *ldap cn attribute*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used when both the first and last name of a record are empty
Format	String
Default Value	NA
Range	NA
Example	ldap cn attribute: display

Parameter – *ldap dn attribute*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used to perform the search request for the detailed view of an LDAP contact.
Format	String
Default Value	NA
Range	NA
Example	ldap dn attribute: customDN

Parameter – *ldap dn query mode*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies which method to use when an individual record is looked up. If configured as "filter", the BluStar device performs a DN search using the root base DN with the filter "(dn=XXXX)". If configured as "base", the BluStar device performs a DN search using the searched DN as a base with a filter defined in the parameter "ldap dn base query filter" and a scope defined in the parameter "ldap dn base query scope". **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.
Format	String list filter/base
Default Value	filter
Range	filter/base
Example	ldap dn query mode: base

Parameter – *ldap dn base query filter*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Filter used when an individual record is looked up if the parameter "ldap dn query mode" is set to "base". **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.
Format	String
Default Value	(objectClass=*)
Range	NA
Example	ldap dn base query filter: (objectClass=*)

Parameter – *ldap dn base query scope*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Scope used when an individual record is looked up if the parameter "ldap dn query mode" is set to "base". A "base" search is performed only on the base DN, a "onelevel" search is performed on the base DN and the first sublevel, and a "subtree" search is performed on the whole tree under the base DN. **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.
Format	String list base/onelevel/subtree
Default Value	subtree
Range	base/onelevel/subtree
Example	ldap dn base query scope: onelevel

Parameter – *ldap search filter*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used to set search filters. This parameter format must follow RFC 4515, for example (sn=%). This parameter must include a '%' character at the place where it will be replaced by a*, b*, etc...
Format	String
Default Value	NA
Range	NA
Example	ldap search filter: (&(sn=%)(number=*))

Parameter – *ldap search scope*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used to set the search scope. A "base" search is performed only on the baseDN, a "onelevel" search is performed on the baseDN and the first sub-level, and a "subtree" search is performed on the whole tree under the base DN.
Format	String list base/onelevel/subtree
Default Value	NA
Range	base/onelevel/subtree
Example	ldap search scope: onelevel

Parameter – *ldap search timeout*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used to set the request timeout for LDAP requests.
Format	Integer, seconds
Default Value	NA
Range	1 to 120
Example	ldap search timeout: 30

Parameter – *ldap network timeout*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used to set the network timeout for LDAP requests.
Format	Integer, seconds
Default Value	NA
Range	1 to 120
Example	ldap network timeout: 50

Parameter – *ldap initial download delay*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Used to set the LDAP initial download delay. Setting a value of 0 does not introduce any delay and the initial download is performed synchronously during the login process. With all other values, the download is performed asynchronously, delayed by the value amount (in seconds) after the login process.
Format	Integer, seconds
Default Value	NA
Range	0 to 120
Example	ldap initial download delay: 60

Parameter – *ldap use ISO-8859-1 encoding*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not the LDAP directory the BluStar device is configured to use utlizes ISO-8859-1 or UTF-8 encoding. If the LDAP directory utlizes ISO-8859-1 encoding and the parameter is set to "1", the BluStar device will transcode any characters using diacritical marks from the ISO-8859-1 character set to the equivalent UTF-8 characters, correcting any character encoding issues. **Note:** This parameter is ignored if the LDAP directory is a Microsoft Active Directory.
Format	Boolean
Default Value	0 (False)
Range	0 - 1 0 = False (LDAP directory uses UTF-8 encoding) 1 = True (LDAP directoy uses ISO-8859-1 encoding)
Example	ldap use ISO-8859-1 encoding: 1

Microsoft Exchange Contact Settings

Parameter – *enable user defined exchange contacts*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether to enable or disable a user's ability to edit his or her Microsoft Exchange contacts configuration.
Format	Boolean
Default Value	0 (disabled)
Range	0 -1 0 (disabled) 1 (enabled)
Example	enable user defined exchange contacts: 1

Parameter – *exchange contacts enabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies whether a user's Microsoft Exchange contacts should be synced with the device's address book. When enabled, the user will not be able to access the personal contacts that have been set up by the administrator.
Format	Boolean
Default Value	0 (disabled)
Range	0 -1 0 (disabled) 1 (enabled)
Example	exchange contacts enabled: 1

Parameter – *exchange default locked*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Indicates whether or not the default configuration parameters can be modified or not by the user. It applies only if a default value is configured. If no defaults are set, the configuration parameter can still be modified by the user.
Format	Boolean
Default Value	0 (Disabled)
Range	0 - 1 0 = Disabled 1 = Enabled
Example	exchange default locked: 1

Parameter – *exchange default interface type*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the default interface type to use to communicate with the Exchange server.
Format	Integer
Default Value	N/A
Range	1 - 2 1 = Exchange 2003 2 = Exchange 2007 SP1 or greater
Example	exchange default interface type: 2

Parameter – *exchange email*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the user's Microsoft Exchange email address.
Format	String
Default Value	NA
Range	NA
Example	exchange email: john.doe@acme.com

Parameter – *exchange default server ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the default server IP address or name for the Exchange server hosting the interface (Exchange 2003 or Exchange 2007 SP1 or greater.
Format	String
Default Value	N/A
Range	N/A
Example	exchange default server ip: mail.acme.com

Parameter – *exchange server ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the user's Microsoft Exchange server IP address or Fully Qualified Domain Name (FQDN).
Format	IP address or FQDN
Default Value	0.0.0.0
Range	NA
Example	exchange server ip: mail.acme.com

Parameter – *exchange user domain*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the user's Microsoft Exchange domain name.
Format	String
Default Value	NA
Range	NA
Example	exchange user domain: acme

Parameter – *exchange default contact folder name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the default contact folder name to be used to access the user contact. This parameter is language dependent and applies only if interface type is configured as Exchange 2003.
Format	String
Default Value	N/A
Range	N/A
Example	exchange default contact folder name: Contacts

Parameter – *exchange contact folder name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the optional custom folder that will be used to store the user's Microsoft Exchange contacts.
Format	String
Default Value	NA
Range	NA
Example	exchange contact folder name: Exchange

Parameter – *exchange default use login credentials*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies whether or not the BluStar device login credentials are used to authenticate to the Exchange server.
Format	Boolean
Default Value	N/A
Range	0 - 1 0 = Disabled (will use the custom credentials configured by the user) 1 = Enabled (will use the Blustar device login credentials)
Example	exchange default use login credentials: 0

Parameter – *exchange use login credentials*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies whether the user's BluStar device user name and password is the same the user's Microsoft Exchange user name and password (enabled) or if login credentials should be manually input (disabled).
Format	Boolean
Default Value	0 (disabled)
Range	0 -1 0 (disabled) 1 (enabled)
Example	exchange use login credentials: 1

Parameter – *exchange username*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the user's Microsoft Exchange user name. This parameter is only used if the parameter "**exchange use login credentials**" is set to disabled.
Format	String
Default Value	NA
Range	NA
Example	exchange username: jdoe

Parameter – *exchange password*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the user's Microsoft Exchange password. This parameter is only used if the parameter "**exchange use login credentials**" is set to disabled. **Note:** The "**exchange password**" parameter is available in the user.cfg file, but the password string will be encrypted. The password can only be input by the user through the contacts menu on the user's respective BluStar device.
Format	NA
Default Value	NA
Range	NA
Example	NA

Parameter – *exchange default ssl enabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the default SSL configuration to use to communicate with the Exchange server.
Format	Boolean
Default Value	N/A
Range	0 - 1 0 = Disabled (BluStar device will use the HTTP protocol) 1 = Enabled (BluStar device will use the HTTPS protocol)
Example	exchange default ssl enabled: 1

Parameter – *exchange ssl enabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies whether SSL (Secure Sockets Layer) should be enabled or disabled.
Format	Boolean
Default Value	0 (disabled)
Range	0 -1 0 (disabled) 1 (enabled)
Example	exchange ssl enabled: 1

Parameter – *exchange custom ews path*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Configures a custom Exchange Web Services (EWS) path on the Exchange server hosting the EWS managed API. By default the path is "ews/exchange.asmx" on a typical Microsoft Exchange installation. This parameter applies only if interface type is configured as Exchange 2007 SP1 or greater.
Format	String
Default Value	N/A
Range	N/A
Example	exchange custom ews path: custom_ews/exchange.asmx

LDAP Directory/Exchange Contacts Update Interval

Parameter – *ldap resync time*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Sets the time of day in a 24-hour period for the BluStar device to automatically update the LDAP directory. **Notes:** • The resync time is based on the local time of the device. • LDAP directory resync will occur any time between the values set for the "ldap resync time" and "ldap resync max delay" parameters. For example, if the "ldap resync time" parameter is set to 02:00 and the "ldap resync max delay" is set to 30, the update will take place any time between 02:00 and 02:30 • The value of 00:00 is 12:00 A.M.
Format	HH:MM (24 hours)
Default Value	02:00
Range	HH=00 to 23, MM=0 to 59
Examples	ldap resync time: 03:15

Parameter – *ldap resync days*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the amount of days that the device waits between resync operations for the LDAP directory. **Note:** A value of 0 causes the device to resync every time the clock reads the proper time, a value of 1 forces the device to wait 24 hours prior to doing the first resync.
Format	Integer
Default Value	0
Range	0 to 364
Examples	ldap resync days: 1

Parameter – *ldap resync max delay*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum time, in minutes, the device waits past the scheduled time before starting a resync for the LDAP directory.
Format	Integer
Default Value	30
Range	0 to 1439
Examples	ldap resync max delay: 60

Parameter – *exchange contacts resync time*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Sets the time of day in a 24-hour period for the BluStar device to automatically update the Exchange contacts. **Notes:** • The resync time is based on the local time of the device. • Exchange contacts resync will occur any time between the values set for the “exchange contacts resync time” and “exchange contacts resync max delay” parameters. For example, if the "exchange contacts resync time" parameter is set to 02:00 and the "exchange contacts resync max delay" is set to 30, the update will take place any time between 02:00 and 02:30The value of 00:00 is 12:00 A.M.
Format	HH:MM (24 hours)
Default Value	02:00
Range	HH=00 to 23, MM=0 to 59
Examples	exchange contacts resync time: 03:15

Parameter – *exchange contacts resync days*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the amount of days that the device waits between resync operations for the Exchange contacts. **Note:** A value of 0 causes the device to resync every time the clock reads the proper time, a value of 1 forces the device to wait 24 hours prior to doing the first resync.
Format	Integer
Default Value	0
Range	0 to 364
Examples	exchange contacts resync days: 1

Parameter – *exchange contacts resync max delay*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum time, in minutes, the device waits past the scheduled time before starting a resync for the Exchange contacts.
Format	Integer
Default Value	30
Range	0 to 1439
Examples	exchange contacts resync max delay: 60

User Settings

Parameter – *user config upload*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Number of seconds until settings or contacts will be re-uploaded to the server IF there has been a change.
Format	Integer
Default Value	3600
Range	0 -16400
Example	user config upload: 4800

Autologin Setting

Parameter – *enable user autologin*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not the BluStar device should automatically log in to a specified default account upon a manual restart, forced restart, or cold reboot. Especially useful in cases where a device is configured for one primary account as it ensures that the account is logged in automatically even after a cold reboot has occurred.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Example	enable user autologin: 1

Power Saving Schedule Settings

Use the following parameters to configure the power saving schedule:

Parameter – *user defined power savings schedule*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not users are allowed to configure the power saving schedule on their BluStar device. If enabled, users will be allowed to configure their own power saving schedule.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	user defined power savings schedule: 0

Parameter – *working monday*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not Mondays are part of the BluStar device user's normal work week.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working monday: 1

Parameter – *working tuesday*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not Tuesdays are part of the BluStar device user's normal work week.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working tuesday: 1

Parameter – *working wednesday*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not Wednesdays are part of the BluStar device user's normal work week.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working wednesday: 1

Parameter – *working thursday*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not Thursdays are part of the BluStar device user's normal work week.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working thursday: 1

Parameter – *working friday*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not Fridays are part of the BluStar device user's normal work week.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working friday: 1

Parameter – *working saturday*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not Saturdays are part of the BluStar device user's normal work week.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working saturday: 0

Parameter – *working sunday*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not Sundays are part of the BluStar device user's normal work week.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working sunday: 0

Parameter – *working all days*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not the BluStar device user's normal work week consists of all they days of the week.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	working all days: 0

Parameter – *working hour weekday start*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the starting hour of the BluStar device user's weekday work schedule. **Note:** The term "weekday" refers to the days from Monday to Friday.
Format	Text
Default Value	6
Range	Dependent on the time format of the respective BluStar device. 1-12 (if time format is 12 hour) 0-23 (if time format is 24 hour)
Example	working hour weekday start: 9

Parameter – *working minute weekday start*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the starting minute of the BluStar device user's weekday work schedule. **Note:** The term "weekday" refers to the days from Monday to Friday.
Format	Text
Default Value	0
Range	0-59
Example	working minute weekday start: 15

Parameter – *working pm weekday start*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether the BluStar device user's weekday work schedule start time defined in the "working hour weekday start" and "working minute weekday start" parameters is AM or PM. **Notes:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekday" refers to the days from Monday to Friday.
Format	Boolean
Default Value	0 (AM)
Range	0-1 0 (AM) 1 (PM)
Example	working pm weekday start: 0

Parameter – *working hour weekday end*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the ending hour of the BluStar device user's weekday work schedule. **Note:** The term "weekday" refers to the days from Monday to Friday.
Format	Text
Default Value	10
Range	Dependent on the time format of the respective BluStar device. 1-12 (if time format is 12 hour) 0-23 (if time format is 24 hour)
Example	working hour weekday end: 5

Parameter – *working minute weekday end*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the ending minute of the BluStar device user's weekday work schedule. **Note:** The term "weekday" refers to the days from Monday to Friday.
Format	Text
Default Value	0
Range	0-59
Example	working minute weekday end: 30

Parameter – *working pm weekday end*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether the BluStar device user's weekday work schedule end time defined in the "working hour weekday end" and "working minute weekday end" parameters is AM or PM. **Notes:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekday" refers to the days from Monday to Friday.
Format	Boolean
Default Value	1 (PM)
Range	0-1 0 (AM) 1 (PM)
Example	working pm weekday end: 1

Parameter – *working hour weekend start*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the starting hour of the BluStar device user's weekend work schedule. **Note:** The term "weekend" refers to Saturday and Sunday.
Format	Text
Default Value	0
Range	Dependent on the time format of the respective BluStar device. 1-12 (if time format is 12 hour) 0-23 (if time format is 24 hour)
Example	working hour weekend start: 11

Parameter – *working minute weekend start*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the starting minute of the BluStar device user's weekend work schedule. **Note:** The term "weekend" refers to Saturday and Sunday.
Format	Text
Default Value	0
Range	0-59
Example	working minute weekend start: 30

Parameter – *working pm weekend start*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether the BluStar device user's weekend work schedule start time defined in the "working hour weekend start" and "working minute weekend start" parameters is AM or PM. **Note:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekend" refers to Saturday and Sunday.
Format	Boolean
Default Value	0 (AM)
Range	0-1 0 (AM) 1 (PM)
Example	working pm weekend start: 0

Parameter – *working hour weekend end*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the ending hour of the BluStar device user's weekend work schedule. **Note:** The term "weekend" refers to Saturday and Sunday.
Format	Text
Default Value	0
Range	Dependent on the time format of the respective BluStar device. 1-12 (if time format is 12 hour) 0-23 (if time format is 24 hour)
Example	working hour weekend end: 3

Parameter – *working minute weekend end*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the ending minute of the BluStar device user's weekend work schedule. **Note:** The term "weekend" refers to Saturday and Sunday.
Format	Text
Default Value	0
Range	0-59
Example	working minute weekend end: 30

Parameter – *working pm weekend end*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether the BluStar device user's weekend work schedule end time defined in the "working hour weekend end" and "working minute weekend end" parameters is AM or PM. **Note:** • This parameter should only be used if the BluStar device is using the 12-hour time format. • The term "weekend" refers to Saturday and Sunday.
Format	Boolean
Default Value	1 (PM)
Range	0-1 0 (AM) 1 (PM)
Example	working pm weekend end: 1

Parameter – *weekend working same as week-days*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not the BluStar device user's weekend work schedule is the same as his/her weekday work schedule. **Note:** The term "weekday" for the Power Saving Schedule feature on the BluStar device refers to the days from Monday to Friday. The term "weekend" refers to Saturday and Sunday.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	weekend working same as weekdays: 0

Terminal Security Settings

Parameter – *require settings password*	**Configuration File**s – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies if a password should be required to edit the BluStar device terminal identity.
Format	Boolean
Default Value	0 (disabled)
Range	0 -1 0 (disabled) 1 (enabled)
Example	require settings password: 1

Parameter – *settings password*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the password required to edit the BluStar device terminal identity if the "require settings password" parameter is enabled.
Format	String
Default Value	aastra
Range	Up to 30 alpha-numeric characters.
Example	settings password: blustar123

Parameter – *logoff disable dial*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows administrators to disable dialing when logged off.
Format	Integer
Default Value	0
Range	0-1 0 (no) 1 (yes)
Example	logoff disable dial: 1

Parameter – *auto answer*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows administrators to change the automatic answer settings. **Note:** This parameter affects all auto-answer features including auto-answer of incoming intercom calls.
Format	Integer
Default Value	0
Range	0-1 0 (no) 1 (yes)
Example	auto answer: 1

Parameter – *auto reboot*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The time at which the devices reboot. To auto reboot ASAP, use current date and time.
Format	yyyy-mm-dd hh:mm:ss
Default Value	NA
Range	NA
Example	auto reboot: 2011-12-13 12:34:56

Parameter – *screen lock time*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Can be set to 0 and the unit of time (e.g. "0 seconds") to disable or to a specified number of seconds, minutes, hours, or days. The screen locks after the set value. **Note:** When setting the value for this parameter, the unit of time must be specified and can be in singular or plural form.
Format	String
Default Value	0 second(s)/minute(s)/hour(s)/day(s) (disabled)
Range	0 second(s)/minute(s)/hour(s)/day(s) (disabled) 1-10000 second(s)/minute(s)/hour(s)/day(s)
Example	screen lock time: 30 seconds

Screen Settings

Screen Dimming Settings

Parameter – *screen 1st dim time*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Can be set to 0 and the unit of time (e.g. "0 seconds") to disable or to a specified number of seconds, minutes, hours, or days. The screen *partially* dims after the set value. **Note:** When setting the value for this parameter, the unit of time must be specified and can be in singular or plural form.
Format	String
Default Value	300 seconds
Range	0 second(s)/minute(s)/hour(s)/day(s) (disabled) 1-10000 second(s)/minute(s)/hour(s)/day(s)
Example	screen 1st dim time: 60 seconds

Parameter – *screen 2nd dim time*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Can be set to 0 and the unit of time (e.g. "0 seconds") to disable or to a specified number of seconds, minutes, hours, or days. The screen *further* dims after the set value. **Note:** When setting the value for this parameter, the unit of time must be specified and can be in singular or plural form.
Format	String
Default Value	0 second(s)/minute(s)/hour(s)/day(s) (disabled)
Range	0 second(s)/minute(s)/hour(s)/day(s) (disabled) 1-10000 second(s)/minute(s)/hour(s)/day(s)
Example	screen 2nd dim time: 5 minutes

Screen Saver Settings

Parameter – *screen save time*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Can be set to 0 and the unit of time (e.g. "0 seconds") to disable or to a specified number of seconds, minutes, hours, or days. The screen saver enables after the set value. **Note:** When setting the value for this parameter, the unit of time must be specified and can be in singular or plural form.
Format	String
Default Value	0 second(s)/minute(s)/hour(s)/day(s) (disabled)
Range	0 second(s)/minute(s)/hour(s)/day(s) (disabled) 1-10000 second(s)/minute(s)/hour(s)/day(s)
Example	screen save time: 2 hours

Show Cursor Settings

Parameter – *show cursor*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Displays the mouse cursor.
Format	Integer
Default Value	0
Range	0-1 0 (no) 1 (yes)
Example	show cursor: 1

Locale Settings

Parameter – *language name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the language you want to display on the BluStar device.
Format	String
Default Value	English
Range	English Dutch French German Italian Japanese Simplified Chinese Spanish **Note:** Language values are case sensitive and are entered in English only.
Example	language name: French

Parameter – *time zone name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the time zone on the BluStar device.
Format	String
Default Value	us-eastern
Range	See Time Zone Name Table below for specific time zone names.
Example	time zone name: us-eastern

Time Zone Name Table

Time Zone Names			
AD-Andorra	BA-Sarajevo	CA-Newfoundland	DE-Berlin
AE-Dubai	BB-Barbados	CA-Atlantic	DK-Copenhagen
AG-Antigua	BE-Brussels	CA-Eastern	DM-Dominica
AI-Anguilla	BG-Sofia	CA-Saskatchewan	DO-Santo Domingo
AL-Tirane	BM-Bermuda	CA-Central	Dhcp
AN-Curacao	BO-La Paz	CA-Mountain	
AR-Buenos Aires	BR-Noronha	CA-Pacific	
AR-San Luis	BR-Belem	CA-Yukon	
AS-Pago Pago	BR-Fortaleza	CH-Zurich	
AT-Vienna	BR-Recife	CK-Rarotonga	
AU-Lord Howe	BR-Araguaina	CL-Santiago	
AU-Tasmania	BR-Maceio	CL-Easter	
AU-Melbourne	BR-Sao Paulo	CN-China	
AU-Sydney	BR-Cuiaba	CO-Bogota	
AU-Broken Hill	BR-Porto Velho	CR-Costa Rica	
AU-Brisbane	BR-Boa Vista	CU-Havana	
AU-Lindeman	BR-Manaus	CY-Nicosia	
AU-Adelaide	BR-Eirunepe	CZ-Prague	
AU-Darwin	BR-Rio Branco		
AU-Perth	BS-Nassau		
AW-Aruba	BY-Minsk		
AZ-Baku	BZ-Belize		
EE-Tallinn	FI-Helsinki	GB-London	HK-Hong Kong
ES-Madrid	FJ-Fiji	GB-Belfast	HN-Tegucigalpa
ES-Canary	FK-Stanley	GD-Grenada	HR-Zagreb
	FO-Faeroe	GE-Tbilisi	HT-Port-au-Prince
	FR-Paris	GF-Cayenne	HU-Budapest
		GI-Gibraltar	
		GP-Guadeloupe	
		GR-Athens	
		GS-South Georgia	
		GT-Guatemala	
		GU-Guam	
		GY-Guyana	
IE-Dublin	JM-Jamaica	KY-Cayman	LC-St Lucia
IS-Reykjavik	JP-Tokyo		LI-Vaduz
IT-Rome			LT-Vilnius
			LU-Luxembourg
			LV-Riga

Time Zone Names			
MC-Monaco MD-Chisinau MK-Skopje MQ-Martinique MS-Montserrat MT-Malta MU-Mauritius MX-Mexico City MX-Cancun MX-Merida MX-Monterrey MX-Mazatlan MX-Chihuahua MX-Hermosillo MX-Tijuana	NI-Managua NL-Amsterdam NO-Oslo NR-Nauru NU-Niue NZ-Auckland NZ-Chatham	OM-Muscat	PA-Panama PE-Lima PL-Warsaw PR-Puerto Rico PT-Lisbon PT-Madeira PT-Azores PY-Asuncion
RO-Bucharest RU-Kaliningrad RU-Moscow RU-Samara RU-Yekaterinburg RU-Omsk RU-Novosibirsk RU-Krasnoyarsk RU-Irkutsk RU-Yakutsk RU-Vladivostok RU-Sakhalin RU-Magadan RU-Kamchatka RU-Anadyr	SA-Saudi Arabia SE-Stockholm SG-Singapore SI-Ljubljana SK-Bratislava SM-San Marino SR-Paramaribo SV-El Salvador	TR-Istanbul TT-Port of Spain TW-Taipei	UA-Kiev US-Eastern US-Central US-Mountain US-Pacific US-Alaska US-Aleutian US-Hawaii UY-Montevideo
VA-Vatican VE-Caracas	YU-Belgrade		

Parameter – *date format*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	This parameter allows the user to change the date displayed on the home screen, in all applications, and in the call logs to various formats. **Note**: If a date format is selected that contains the year, the home screen will not display the year due to space limitations.
Format	Integer
Default Value	0
Range	0 (WWW MMM DD) (default) 1 (DD-MMM-YY) 2 (YYYY-MM-DD) 3 (DD/MM/YYYY) 4 (DD/MM/YY) 5 (DD-MM-YY) 6 (MM/DD/YY) 7 (MMM DD) 8 (DD MMM YYYY) 9 (WWW DD MMM) 10 (DD MMM) 11 (DD.MM.YYYY)
Example	date format: 7

Parameter – *time format*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	This parameter changes the time displayed on the home screen, in all applications, and in the call logs to a 12 hour or 24 hour format. Use "0" for a 12 hour format and "1" for a 24 hour format.
Format	Integer
Default Value	0
Range	0 (12 hr format) 1 (24 hr format)
Example	time format: 1

Audio/Video Settings

Parameter – *video max kbitrate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum video bandwidth limit.
Format	Integer
Default Value	Dynamic
Range	5000, 3000, 2500, 1500, 768, 384, 128
Example	video max kbitrate: 3000

Parameter – *audio max kbitrate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum audio bandwidth limit.
Format	Integer
Default Value	Dynamic
Range	64, 32, 24, 16
Example	audio max kbitrate: 24

Parameter – *user defined video rate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	This administrator parameter allows (or disallows) users the ability to change their maximum video data transmit and receive rates allowed for calls with BluStar 8000i and BluStar for Conference Room or non-BluStar 8000i and non-BluStar for Conference Room devices.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	user defined video rate: 0

Parameter – *max 8000i h264 tx rate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum video data transmit rate allowed when in a call with BluStar 8000i and BluStar for Conference Room devices.
Format	Integer
Default Value	6000
Range	5000, 2500, 1500, 768, 512, 384, 128
Example	max 8000i h264 tx rate: 2500

Parameter – *max 8000i h264 rx rate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum video data receive rate allowed when in a call with BluStar 8000i and BluStar for Conference Room devices.
Format	Integer
Default Value	6000
Range	5000, 2500, 1500, 768, 512, 384, 128
Example	max 8000i h264 rx rate: 2500

Parameter – *max h264 tx rate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum video data transmit rate allowed when in a call with non-BluStar 8000i and non-BluStar for Conference Room devices.
Format	Integer
Default Value	768
Range	3000, 1920, 1536, 1024, 768, 512, 384, 128
Example	max h264 tx rate: 512

Parameter – *max h264 rx rate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the maximum video data receive rate allowed when in a call with non-BluStar 8000i and non-BluStar for Conference Room devices.
Format	Integer
Default Value	768
Range	3000, 1920, 1536, 1024, 768, 512, 384, 128
Example	max h264 rx rate: 512

Call Forward Settings

Parameter – *call forward disabled*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Enables or disables the ability to configure Call Forwarding. If this parameter is set to '0', a user and administrator can configure Call Forwarding via the BluStar device UI from the "Call Handling" screen in the Tools menu. If this parameter is set to '1', all "Call Forward" options are removed from the BluStar device UI, preventing the ability to configure Call Forwarding.
Format	Boolean
Default Value	0 (false)
Range	0 -1 0 (false) 1 (true)
Example	call forward disabled: 1

Parameter – *sip forward all state*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	If call forward all state is ON, then the Call Forward All settings will be used in normal scenarios. **Note**: The "sip forward all number" parameter must be set.
Format	Boolean
Default Value	0
Range	0-1 0 (off) 1 (on)
Example	sip forward all state: 1

Parameter – *sip forward all number*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the Call Forward All number. **Note:** The "sip forward all state" parameter must be set.
Format	String (number or URL)
Default Value	NA
Range	NA
Example	sip forward all number: 2134

Parameter – *sip forward busy state*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	If call forward busy state is ON, then the Call Forward Busy settings will be used in normal scenarios. **Note**: The "sip forward busy number" parameter must be set.
Format	Boolean
Default Value	0
Range	0-1 0 (off) 1 (on)
Example	sip forward busy state: 1

Parameter – *sip forward busy number*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the Call Forward Busy number. **Note**: The "sip forward busy state" parameter must be set.
Format	String (number or URL)
Default Value	NA
Range	NA
Example	sip forward busy number: 4123

Parameter – *sip forward no answer state*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	If call forward no answer state is ON, then the Call Forward No Answer settings will be used in normal scenarios. **Note:** The "sip forward no answer number" and "sip ring number" parameters must also be set.
Format	Boolean
Default Value	0
Range	0-1 0 (off) 1 (on)
Example	sip forward no answer state: 1

Parameter – *sip forward no answer number*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the Call Forward No Answer number. **Note**: The "sip forward no answer state" parameter must be ON and the "sip ring number" parameter must be set.
Format	String (number or URL)
Default Value	NA
Range	NA
Example	sip forward no answer number: 3523

Parameter – *sip ring number*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the number of rings until the call will be forwarded if there is no answer. **Note**: The "sip forward no answer state" parameter must be ON and the "sip forward no answer number" parameter must be set.
Format	Integer
Default Value	3
Range	1-10
Example	sip ring number: 5

Do Not Disturb Settings

Parameter – *dnd ui*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Enables or disables the ability to configure DND through the BluStar device UI. If this parameter is set to '0', users will not be able to enable DND via the BluStar device UI. If this parameter is set to '1', DND can be enabled or disabled by users at their discretion by selecting the DND button on their respective devices.
Format	Boolean
Default Value	1 (Enabled)
Range	0 = Disabled 1 = Enabled
Example	dnd ui: 0

Call Waiting Settings

Parameter – *call waiting*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Allows you to enable or disable call waiting on the BluStar device. If you enable call waiting (default), the user has the option of accepting a second call while currently on the first call. If you disable call waiting, and a user is currently on a call, a second incoming call is automatically rejected by the BluStar device with a busy message. If you disable call waiting on the BluStar device, and the user is on a call, any additional incoming calls will receive a busy message unless the "Call Forward Busy" option is configured. If this is the case, the BluStar device will forward the call accordingly as per the rules configured.
Format	Boolean
Default Value	1 (Enabled)
Range	0 (Disabled) 1 (Enabled)
Example	call waiting: 0

Incoming Intercom Call Auto-Answer Settings

Parameter – *sip allow auto answer*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables/disables the auto-answer feature for incoming intercom calls. If enabled, the BluStar device will recognize an incoming intercom call by the information relayed in the "Call-Info" header of the SIP INVITE and automatically answer the call. If disabled, the phone will treat the intercom call as if it is a normal incoming call. **Note**: The parameter "auto answer" must be enabled for this parameter to take effect.
Format	Boolean
Default Value	1
Range	0-1 0 (no) 1 (yes)
Example	sip allow auto answer: 0

Voicemail Settings

Parameter – *sip vmail*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the phone number of the voicemail system connected to the SIP account. This parameter specifies the phone number you dial from your BluStar device to retrieve your voicemail.
Format	Integer
Default Value	NA
Range	NA
Example	sip vmail: 5000

Video Voicemail Client Integration Settings

Parameter – *voicemail integration url*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The url (http or https) the BluStar device calls to perform voicemail integration. **Note:** The parameter "sip xml notify event" must be enabled to ensure full functionality of the video voicemail client.
Format	String
Default Value	N/A
Range	N/A
Example	voicemail integration url: http://myserver.com/integration.php

Parameter – *voicemail integration use login credentials*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	By default the BluStar 8000i and BluStar for Conference Room use SIP credentials to authenticate (digest method) to the voicemail integration server. Enabling this configuration parameter makes the BluStar device use the user login/password instead.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Example	voicemail integration use login credentials: 1

Parameter – *voicemail integration needs sip registration*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used by the voicemail integration API to indicate to the software if SIP registration is needed before sending a user command via the API. When enabled, the BluStar device checks the extension registration status before sending an API command. If the extension is not registered, an error message is displayed.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Example	voicemail integration needs sip registration: 1

Emergency Dial Plan Settings

Parameter – *emergency dial plan*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to specify an emergency number to use on your BluStar device so a caller can contact emergency services in the local area even when the device is locked. The default emergency numbers on the BluStar device are 911, 999, 112, and 110. 911 - A United States emergency number. 999 - A United Kingdom emergency number. 112 - An international emergency telephone number for GSM mobile phone networks. In all European Union countries it is also the emergency telephone number for both mobile and fixed-line telephones. 110 - A police and/or fire emergency number in Asia, Europe, Middle East, and South America. **Dial plan (characters)** — **Length (bytes)** 911 — 14 4xx — 18 x+#|xx+* — 35 911|999|112|110|450 — 54 911|112|011XX+#|101XX+#|1[2-3]XXXXXXXXX|[4-5]XXXXXXXXX|[6-7]XXXXXXXXXX,3|[8-9]XXXXXXXXXX,2|XX+*|XX+#|*XXX+#|#XX+#|4xx,2 — 325 **Note:** Contact your local phone service provider for available emergency numbers in your area.
Format	Integer
Default Value	911|999|112|110
Range	Up to 512 characters
Example	emergency dial plan: 911|999

Parameter – *sip emergency auth name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used in the user name field of the Authorization header field of the *SIP REGISTER* request. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip emergency auth name: 5553456

Parameter – *sip emergency display name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Used in the display name field of the *From* SIP header field. Some IP PBX systems use this as the caller's ID and some may overwrite this with the string that is set at the PBX system. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip emergency display name: Joe Smith

Parameter – *sip emergency user name*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	User name used in the name field of the *SIP URI* for the BluStar device and for registering the BluStar device at the registrar. Utilized when the emergency dial plan feature is configured and only when the device is logged off. **Note:** The BluStar device support user names containing dots ("..").
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip emergency user name: 1010

Parameter – *sip emergency password*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The password that will be used to register at the registrar. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	Text
Default Value	NA
Range	Up to 20 alphanumeric characters
Example	sip emergency password: 12345

Parameter – *sip emergency proxy ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The IP address of the SIP proxy server for which the BluStar device uses to send all SIP requests. A SIP proxy is a server that initiates and forwards requests generated by the BluStar device to the targeted user. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	IP address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	Up to 64 alphanumeric characters.
Example	sip emergency proxy ip: 192.168.0.101

Parameter – *sip emergency proxy port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The proxy server's port number. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	Integer
Default Value	0
Range	NA
Example	sip emergency proxy port: 5060

Parameter – *sip emergency outbound proxy*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	This is the address of the outbound proxy server. All SIP messages originating from the BluStar device are sent to this server. For example, if you have a Session Border Controller in your network, then you would normally set its address here. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	IP Address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	NA
Example	sip emergency outbound proxy: 10.42.23.13

Parameter – *sip emergency outbound proxy port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The proxy port on the proxy server to which the BluStar device sends all SIP messages. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	Integer
Default Value	0
Range	NA
Example	sip emergency outbound proxy port: 5060

Parameter – *sip emergency registrar ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The address of the registrar for which the BluStar device uses to send *REGISTER* requests. A SIP registrar is a server that maintains the location information of the BluStar device. A value of 0.0.0.0 disables registration. However, the BluStar device is still active and you can dial using the username@ip address of the BluStar device. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	IP address or Fully Qualified Domain Name
Default Value	0.0.0.0
Range	NA
Example	sip emergency registrar ip: 192.168.0.101

Parameter – *sip emergency registrar port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The registrar's port number. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	Integer
Default Value	0
Range	NA
Example	sip emergency registrar port: 5060

Parameter – *sip emergency registration period*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The requested registration period, in seconds, from the registrar. Utilized when the emergency dial plan feature is configured and only when the device is logged off.
Format	Integer
Default Value	0
Range	0 - 2147483647
Example	sip emergency registration period: 3600

Picture ID Feature

Parameter – *image server uri*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to specify the server URI where pictures are stored for display to the BluStar device during incoming and outgoing calls, and in the directory, callers list, and redial list entries. The pictures are dynamically retrieved from the centralized server for each call and then locally cached in the BluStar device to reduce network traffic. If there is no picture on the central server for the dialed and/or caller ID number, and directory, callers list, and/or the dial list entry, the generic blue figure image is shown. Pictures can be in either "png", "gif", or "jpeg" formats, but must be named ".png", up to 320 pixels wide x 320 pixels tall, and in 24 bit color. **Notes:** • Entering no value for this parameter disables this feature. • The "image server uri" parameter supports FTP, TFTP, HTTP, and HTTPS.
Format	Server URI String ([protocol]://[username]:[password]@[server]:[port])
Default Value	NA
Range	NA
Examples	image server uri: http://mypictureserver.acme.com image server uri: ftp://mypictureserver.acme.com (anonymous ftp connection) image server uri: ftp://user:password@mypictureserver.acme.com (ftp connection using "user" and "password" for the credentials) image server uri: tftp://mypictureserver.acme.com

BLF List URI Settings

Parameter– *list uri*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the URI that the BluStar device uses to access the BLF list on the BroadSoft server when the BLF list key is selected. When you specify a URI for this parameter, the BluStar device uses the internet to access the BLF list on the BroadSoft server.
Format	sip:HTTP server path or Fully Qualified Domain Name
Default Value	NA
Range	NA
Example	list uri: sip:my8000i-blf-list@as.broadworks.com

BLF Subscription Period Settings

Parameter – *sip blf subscription period*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	The requested duration, in seconds, before the BLF subscription times out. The BluStar device will attempt to re-subscribe to the BLF subscription service before the defined subscription period ends.
Format	Integer
Default Value	3600
Range	120 - 2147483647
Example	sip blf subscription period: 2000

Directed Call Pickup

Parameter – *directed call pickup*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Enables or disables the use of "directed call pickup" feature.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	directed call pickup: 1

Parameter – *directed call pickup prefix*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Allows you to enter a specific prefix string (depending on what is available on your server), that the BluStar device automatically dials when dialing the Directed Call Pickup number. For example, for Broadsoft servers, you can enter a value of ***97** for the "**directed call pickup prefix**". When the device performs the Directed Call Pickup after selecting a BLF or BLF/List softkey, the device prepends the *97 value to the designated extension of the BLF or BLF/List softkey when dialing out. **Notes**: • The default method for the device to use is Directed Call Pickup over BLF if the server provides applicable information. If the Directed Call Pickup over BLF information is missing in the messages to the server, the Directed Call Pickup by Prefix method is used if a value for the prefix code exists in the configuration. • You can define only one prefix at a time for the entire BLF/List. • The device that picks up displays the prefix code + the extension number (for example, *981234 where prefix key = *97, extension = 1234). • Symbol characters are allowed (for example "*").
Format	Integer
Default Value	NA
Range	NA
Example	directed call pickup prefix: *97

BluStar Server Interoperability Settings

Parameter – *sip presence server*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the IP address or name of the BluStar Server.
Format	String
Default Value	N/A
Range	N/A
Example	sip presence server: 192.168.0.120

Parameter – *sip presence server port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies the port to use on the BluStar Server.
Format	Integer
Default Value	5060
Range	1 through 65535
Example	sip presence server port: 5061

Parameter – *sip presence user name*	**Configuration Files** – <user>.cfg
Description	Specifies the user name for the user defined on the BluStar Server (typically the user's e-mail address).
Format	String
Default Value	N/A
Range	N/A
Example	sip presence user name: jdoe@aastra.com

Visual Enhancement Settings

Parameter – *visual enhancement*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Enables or disables visual aids for the presence color status bars and line state indicators. When enabled, users will be able to differentiate the presence status and line states by color and/or icon.
Format	Integer
Default Value	0 (Disabled)
Range	0 (Disabled) 1 (Enabled)
Example	visual enhancement: 1

XML Settings

Parameter – *xml get timeout*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to specify a timeout value, in seconds, that the BluStar device waits for the far side to return a response after accepting the HTTP GET connection. If the far side accepts the GET connection but never returns a response, it blocks the BluStar device until it is rebooted. If you enter a value greater than "0" for this parameter, the BluStar device times out and will not be blocked.
Format	Integer
Default Value	0 (never timeout)
Range	0 - 2147483647 seconds
Example	xml get timeout: 20

Advanced Operational Parameters

Update Caller ID Setting

Parameter – *sip update callerid*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables the updating of the Caller ID information during a call.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	sip update callerid: 1

Blind Transfer Setting

Parameter – *sip cancel after blind transfer*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Forces the BluStar device to use the Blind Transfer method. This method sends the CANCEL message after the REFER message when blind transferring a call.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	sip cancel after blind transfer: 1

User-Agent Settings

Parameter – *sip user-agent*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to enable or disable the addition of the User-Agent and Server SIP headers in the SIP stack. The value of "0" prevents the UserAgent and Server SIP header from being added to the SIP stack. The value of "1" allows these headers to be added.
Format	Boolean
Default Value	1 (true)
Range	0-1 0 (false) 1 (true)
Example	sip user-agent: 0

Inactive Video Stream Settings

Parameter – *remove inactive video stream*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	When enabled, the BluStar device will remove the video stream from the SDP in situations where the video stream should be disabled but the audio stream should be kept active.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Examples	remove inactive video stream: 1

Blacklist Duration Setting

Parameter – *sip blacklist duration*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the length of time, in seconds, that a failed server remains on the server blacklist. The BluStar device avoids sending a SIP message to a failed server (if another server is available) for this amount of time. The value of "0" disables the blacklist feature.
Format	Integer
Default Value	300 (5 minutes)
Range	0 to 9999999
Example	sip blacklist duration: 600

Whitelist Proxy Setting

Parameter – *sip whitelist*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	This parameter enables/disables the whitelist proxy feature, as follows: Set to 0 to disable the feature. Set to 1 to enable the feature. When this feature is enabled, a BluStar device accepts call requests from a trusted proxy server *only*. The BluStar device rejects any call requests from an untrusted proxy server.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	sip whitelist: 1

Transport Layer Security (TLS) Settings

Parameter – *sip transport protocol*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The protocol that the BluStar device uses to send out SIP messages. **Note:** If you set the value of this parameter to 4 (TLS), the BluStar device checks to see if the "**sips persistent tls**" parameter is enabled. If it is enabled, the device uses Persistent TLS on the connection. If "**sips persistent tls**" is disabled, then the device uses TLS on the connection. If TLS is used, you must specify the Root and Intermediate Certificates, the Local Certificate, the Private Key, and the Trusted Certificates. If the device uses Persistent TLS, you MUST specify the Trusted Certificates; the Root and Intermediate Certificates, the Local Certificate, and the Private Key are optional. This parameter implies a keep-alive mechanism.
Format	Integer
Default Value	1 (UDP)
Range	1 = UDP 2 = TCP 4 = Transport Layer Security (TLS)
Example	sip transport protocol: 4

Parameter – *sips persistent tls*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables the use of Persistent Transport Layer Security (TLS). Persistent TLS sets up the connection to the server once and re-uses that connection for all calls from the device. The setup connection for Persistent TLS is established during the registration of the device If the devices are set to use Persistent TLS, and a call is made from the device , this call and all subsequent calls use the same authenticated connection. This significantly reduces the delay time when placing a call. **Notes:** • Persistent TLS requires the "outbound proxy" and "outbound proxy port" parameters be configured in the configuration files. • There can be only one persistent TLS connection created per device. The device establishes the TLS connection to the configured outbound proxy. • If you configure the device to use Persistent TLS, you must also specify the Trusted Certificate file to use. The Root and Intermediate Certificates, Local Certificate, and Private Key files are optional.
Format	Boolean
Default Value	0 (Disabled)
Range	0 - 1 0 = Disabled 1 = Enabled
Example	sips persistent tls: 1

Parameter – *sip persistent tls keep alive*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	When enabled, the configured value indicates frequency (in seconds) that the BluStar device will send the keep alive messages.
Format	Boolean
Default Value	0 (Disabled)
Range	0 - 3600
Example	sip persistent tls keep alive: 10

Parameter – *sips tls authentication*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not TLS authentication is enabled or disabled.
Format	Boolean
Default Value	0 (Disabled)
Range	0 - 1 0 = Disabled 1 = Enabled
Example	sips tls authentication: 1

Parameter – *sip local tls port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the local source port (SIPS/TLS) from which the BluStar device sends SIP messages.
Format	Numeric
Default Value	5061
Range	Greater than 1024 and less than 65535. **Note:** It is recommended that you avoid conflict with any TCP ports being used.
Example	sip local tls port: 5061

Parameter – *sip outbound support*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether or not the BluStar device uses Draft 15 (draft-ietf-sip-outbound-15) support for SIP outbound packets. A SIP User Agent (UA) behind a firewall, reuses an existing connection (usually the REGISTER outbound connection) for the inbound request if the proxy supports it. The UA uses keep-alive packets to monitor the connection status. **Notes:** • If Persistent TLS is set on the device, then only one TLS persistent connection can be established since the device uses the local port 5061 for connection purposes. If TLS is set on the device, more than one connection can be setup since the device uses a random local port for connection purposes. • This parameter must be enabled to start the keep-alive task for a particular transport.
Format	Boolean
Default Value	0 (Disabled)
Range	0 - 1 0 = Disabled 1 = Enabled
Example	sip outbound support: 1

Parameter – *sips root and intermediate certificates*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to specify the SIP Root and Intermediate Certificate files to use when the BluStar device uses the TLS transport protocol to setup a call. The Root and Intermediate Certificate files contain one root certificate and zero or more intermediate certificates which must be placed in order of certificate signing with root certificate being the first in the file. If the local certificate is signed by some well known certificate authority, then that authority provides the user with the Root and Intermediate Certificate files (most likely just CA root certificate). This parameter is required when configuring TLS (optional for Persistent TLS). You can use this parameter in three ways: • To download no certificates • To download a certificate from the original configuration server • To download a certificate from another specified server To download a specific file, the string value **must have a filename** at the end of the string. For example: sips root and intermediate certificates: ftp://admin:admin!@1.2.3.4:50/path/8000iRootCert.pem where "path" is the directory and "8000iRootCert.pem" is the filename. If you do not specify a filename, the download fails. **Note:** The certificate files must use the format ".pem". To create custom certificate files to use on your BluStar device, contact Aastra Technical Support.
Format	<filename>.pem
Default Value	N/A
Range	N/A
Example	The following example downloads no root and intermediate certificate file: sips root and intermediate certificates: The following example downloads the root and intermediate certificate file from the original configuration server. sips root and intermediate certificates: 8000iRootCert.pem The following example uses FTP to download the firmware file "8000iRootCert.pem" (root and intermediate certificate file) from the "path" directory on server 1.2.3.4 using port 50: sips root and intermediate certificates: ftp://admin:admin!@1.2.3.4:50/path/8000iRootCert.pem

Parameter – *sips local certificate*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to specify the Local Certificate file to use when the BluStar device uses the TLS transport protocol to setup a call. This parameter is required when configuring TLS (optional for Persistent TLS). You can use this parameter in three ways: • To download no certificates • To download a certificate from the original configuration server • To download a certificate from another specified server To download a specific file, the string value **must have a filename** at the end of the string. For example: sips local certificate: ftp://admin:admin!@1.2.3.4:50/path/8000iLocalCert.pem where "path" is the directory and "phonesLocalCert.pem" is the filename. If you do not specify a filename, the download fails. **Note:** The certificate file must use the format ".pem". To create specific certificate files to use on your BluStar device, contact Aastra Technical Support.
Format	<filename>.pem
Default Value	N/A
Range	N/A
Example	The following example downloads no local certificate file: sips local certificate: The following example downloads the local certificate file from the original configuration server. sips local certificate: 8000iLocalCert.pem The following example uses FTP to download the firmware file "8000iLocalCert.pem" (local certificate file) from the "path" directory on server 1.2.3.4 using port 50: sips local certificate: ftp://admin:admin!@1.2.3.4:50/path/8000iLocalCert.pem

Parameter – *sips private key*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to specify a Private Key file to use when the BluStar device uses the TLS transport protocol to setup a call. This parameter is required when configuring TLS (optional for Persistent TLS). You can use this parameter in three ways: • To download no private key • To download a private key from the original configuration server • To download a private key from another specified server To download a specific file, the string value **must have a filename** at the end of the string. For example: sips private key: ftp://admin:admin!@1.2.3.4:50/path/8000iPrivatekey.pem where "path" is the directory and "phonesPrivateKey.pem" is the filename. If you do not specify a filename, the download fails. **Note:** The key file must use the format ".pem". To create specific private key files to use on your BluStar device, contact Aastra Technical Support.
Format	<filename>.pem
Default Value	N/A
Range	N/A
Example	The following example downloads no private key file: sips private key: The following example downloads the private key file from the original configuration server. sips private key: 8000iPrivateKey.pem The following example uses FTP to download the firmware file "8000iPrivateKey.pem" (private key file) from the "path" directory on server 1.2.3.4 using port 50: sips private key: ftp://admin:admin!@1.2.3.4:50/path/8000iPrivateKey.pem

Parameter – *sips trusted certificates*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to specify the Trusted Certificate files to use when the BluStar device uses the TLS transport protocol to setup a call. The Trusted Certificate files define a list of trusted certificates. The device's trusted list must contain the CA root certificates for all the servers it is connecting to. For example, if the device is connecting to server A which has a certificate signed by CA1, and server B that has a certificate signed by CA2, the device must have CA1 root certificate and CA2 root certificate in its Trusted Certificate file. This parameter is required when configuring TLS or Persistent TLS. You can use this parameter in three ways: • To download no certificates • To download a certificate from the original configuration server • To download a certificate from another specified server To download a specific file, the string value **must have a filename** at the end of the string. For example: sips trusted certificates: ftp://admin:admin!@1.2.3.4:50/path/8000iTrustedCert.pem where "path" is the directory and "8000iTrustedCert.pem" is the filename. If you do not specify a filename, the download fails. **Note:** The certificate files must use the format ".pem". To create custom certificate files to use on your BluStar device, contact Aastra Technical Support.
Format	<filename>.pem
Default Value	N/A
Range	N/A
Example	The following example downloads no trusted certificate file: sips trusted certificates: The following example downloads the trusted certificate file from the original configuration server. sips trusted certificates: 8000iTrustedCert.pem The following example uses FTP to download the firmware file "8000iTrustedCert.pem" (trusted certificate file) from the "path" directory on server 1.2.3.4 using port 50: sips trusted certificates: ftp://admin:admin!@1.2.3.4:50/path/8000iTrustedCert.pem

Symmetric UDP Signaling Settings

Parameter – *sip symmetric udp signaling*	**Configuration Files –** aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows you to enable or disable the BluStar device to use port 5060 to send SIP UDP messages. The value "1" (which is the default) enables the device to use port 5060. The value "0" disables the device from using port 5060 and allows the device to choose a random port to send SIP UDP messages.
Format	Boolean
Default Value	1 (Enabled)
Range	0 - 1 0 = Disabled 1 = Enabled
Example	sip symmetric udp signaling: 0

XML SIP Notify Settings

Parameter – *sip xml notify event*	**Configuration Files**– aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables the BluStar device to accept or reject an aastra-xml SIP NOTIFY message. To ensure the SIP NOTIFY is coming from a trusted source, it is recommended that you enable the Whitelist Proxy Setting feature ("**sip whitelist"** parameter) on the BluStar device. If enabled, and the BluStar device receives a SIP NOTIFY from a server that is NOT on the whitelist (i.e. untrusted server), the BluStar device rejects the message.
Format	Boolean
Default Value	0
Range	0-1 0 (disabled) 1 (enabled)
Example	sip xml notify event: 1

Parameter – *action uri xml sip notify*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the URI to be called when an empty XML SIP NOTIFY is received by the BluStar device. This parameter can use the following variable: $$LOCALIP$$ The "**sip xml notify event"** parameter must be enabled.
Format	HTTP(s) server path or Fully Qualified Domain Name
Default Value	NA
Range	NA
Example	action uri xml sip notify: http://myserver.com/myappli.xml

DNS Query Setting

Parameter– *sip dns query type*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the Domain Name Service (DNS) query method to use when the BluStar device performs a DNS lookup.
Format	Integer
Default Value	1
Range	**0 A only** - The BluStar device issues requests for "**A**" (Host IP Address) records from the DNS server to get the IP address, and uses the default port number of 5060. **1 SRV & A** - The BluStar device issues requests for "**SRV**" (Service Location Record) records from the DNS server to get the port number. Most often, the IP address is included in the response from the DNS server to avoid extra queries. If there is no IP address returned in the response, the BluStar device sends out the request for "**A**" records from the DNS server to find the IP address. **2 NAPTR & SRV & A** - First, the BluStar device sends "**NAPTR**" (Naming Authority Pointer) lookup to get the "**SRV**" pointer and service type. For example, if Global SIP transport protocol on the BluStar device is "UDP", and Proxy server on the BluStar device is "test.aastra.com", then: 1. If the **NAPTR** record is returned empty, the BluStar device will use the default value "_sip._udp.test.aastra.com" for the "SRV" lookup. 2. If the **NAPTR** record is returned "test.aastra.com SIP+D2U ...._sip._udp.abc.aastra.com", the BluStar device will use "_sip._udp.abc.aastra.com" for the "**SRV**" lookup. 3. If the **NAPTR** record is returned "test.aastra.com SIP+D2T ...._sip._tcp.test.aastra.com", where the service type TCP mismatches the BluStar device configured transport protocol "UDP", the BluStar device will ignore this value and use the default value "_sip._udp.test.aastra.com" for the "**SRV**" lookup. **Note:** The BluStar device does not use the service type sent by the **NAPTR** response to switch its transport protocol, nor does it use the **NAPTR** response to determine whether to use a secure or unsecure communication path. The BluStar device will always use a global sip protocol that is configured on the BluStar device via configuration files. After performing **NAPTR**, the BluStar device sends "**SRV**" lookup to get the IP address and port number. If there is no IP address in the "**SRV**" response, then it sends out an "**A**" lookup to get it.
Example	sip dns query type: 2

Ignore Out of Order SIP Requests

Parameter– *sip accept out of order requests*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables a workaround for non-compliant SIP devices (for example, Asterisk) that do not increment the CSeq numbers in SIP requests sent to the BluStar device.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	sip accept out of order requests: 1

Optional "Allow" and "Allow-Event" Headers

Parameter – *sip notify opt headers*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables and disables whether or not the "Allow" and "Allow-Events" optional headers are included in the SIP NOTIFY messages sent from the BluStar device to the server.
Format	Boolean
Default Value	1
Range	0-1 0 (disabled - optional headers are removed from the SIP NOTIFY message) 1 (enabled - no change; optional headers are included in SIP NOTIFY message)
Example	sip notify opt headers: 0

P-Asserted Identity (PAI)

Parameter – *sip pai*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables whether the SIP PAI displays on the BluStar device.
Format	Boolean
Default Value	1
Range	0-1 0 (disabled) 1 (enabled)
Example	sip pai: 0

Compact SIP Header

Parameter – *sip compact headers*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables the BluStar device to use compact SIP headers in the SIP packets sent from the BluStar device.
Format	Boolean
Default Value	0 (disabled- uses long SIP header format)
Range	0-1 0 (disabled - uses long SIP header format) 1 (enabled - uses short [compact] SIP header format)
Example	sip compact headers: 1

Dial Plan Terminator

Parameter – *sip dial plan terminator*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	Specifies whether or not pressing the hash/pound (i.e. "#") key, while performing an outgoing call on an open line, should be sent as %23 to the proxy in the dial string or if the key should be used as a dial plan terminator (i.e. dials out the call immediately). When enabled, the hash/pound key does not act as a dial plan terminator and is instead sent as %23 to the proxy in the dial string. When disabled (default), the hash/pound key acts as a dial plan terminator.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled - # used as a dial plan terminator) 1 (enabled - # sent as %23 in dial string)
Example	sip dial plan terminator: 1

LLDP-MED Settings

Parameter – *lldp*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED).
Format	Boolean
Default Value	1 (Enabled)
Range	0 - 1 0 (Disabled) 1 (Enabled)
Example	lldp: 0

Parameter – *lldp interval*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	The amount of time, in seconds, between the transmission of LLDP Data Unit (LLDPDU) packets. The value of zero (0) disables this parameter.
Format	Integer
Default Value	30
Range	0 - 2147483647
Example	lldp interval: 60

Parameter – *use lldp elin*	Configuration Files – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Enables or disables the use of an Emergency Location Identification Number (ELIN) received from LLDP as a caller ID for emergency numbers.
Format	Boolean
Default Value	1 (Enabled)
Range	0 - 1 0 (Disabled) 1 (Enabled)
Example	use lldp elin: 0

Parameter – *lldp startinterval*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Controls the LLDP start interval. This parameter is only valid during the device boot-up process and it will control the LLDP-MED time-out interval where the device sends LLDP-MED advertisements and listens for the LLDP-MED responses from the switch before proceeding to the DHCP stage.
Format	Integer
Default Value	32 (seconds)
Range	0 - 65535 (seconds)
Example	lldp startinterval: 7

Parameter – *lldp optional inventory management tlv*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies whether all or none of the LLDP-MED Inventory Management TLV sets are sent.
Format	Integer
Default Value	1 (Send all LLDP-MED Inventory Management TLV sets)
Range	0- 1 0 (Do not send any LLDP-MED Inventory Management TLV sets) 1 (Send all LLDP-MED Inventory Management TLV sets)
Example	lldp optional inventory management tlv: 0

Troubleshooting Parameters

The following parameters in this section allow the system administrator to set alert and logging settings for trouble-shooting purposes.

On-Screen Connection Quality Alarms

Parameter – *packet loss lower threshold*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the lower threshold of packet loss whereby if the percentage of packet loss is above the configured threshold, the poor network performance alert will be displayed on screen.
Format	Percentage
Default Value	8
Range	0-100
Example	packet loss lower threshold: 6

Parameter – *packet loss upper threshold*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the upper threshold of packet loss whereby if the percentage of packet loss is above the configured threshold, the very poor network performance alert will be displayed on screen.
Format	Percentage
Default Value	15
Range	0-100
Example	packet loss upper threshold: 20

Syslog Settings

Note:
Some parameters in this section utilize a different syntax and must be prefaced by the term "BluStar Settings:". Such parameters can be recognized by their respective examples.

Syslog Location

Parameter – *log server ip*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the log server IP address for which to save system log files for troubleshooting purposes.
Format	IP address
Default Value	0.0.0.0
Range	NA
Example	log server ip: 192.168.3.2

Parameter – *log server port*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Specifies the log server IP port to use to save log files for troubleshooting purposes.
Format	Integer
Default Value	514
Range	Any valid IP port
Example	log server port: 514

System-Wide Logging

Parameter – *LogLevel*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Sets the baseline log level for all of the modules. Individual modules will use the higher of this parameter of their own specific setting. There are 10 base line log levels for the modules. **Note:** Setting a log level higher than 4 may impact performance.
Format	Integer
Default Value	1 (Fatal Error)
Range	
Example	BluStar Settings: LogLevel=2

#	Log Level
0	Always
1	Fatal Error
2	Serious Error
3	Minor Error
4	Warning
5	Info
6	Verbose
7	Debug Level 1
8	Debug Level 2
9	Debug Level 3

Parameter – *WriteToFlag*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	A mask that controls the data path(s) for the logging data.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	BluStar Settings: WriteToFlag=0

SIP Stack Logging

Parameter – *VSipServer_LogLevel*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Sets the SIP stack log level. There are 8 SIP stack log levels.
Format	Integer
Default Value	3 (Minor Error)
Range	# / Log Level 0 Always 1 Fatal Error 2 Serious Error 3 Minor Error 4 Warning 5 Info 6 Verbose 7 Debug Level 1
Example	BluStar Settings: VSipServer_LogLevel=5

Parameter – *VSipServer_WriteToFlag*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	A mask that controls the data path(s) for the SIP stack logging data.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	BluStar Settings: VSipServer_WriteToFlag=1

Debug Logging

Parameter – *DBG_Modules*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Allows for enhanced severity filtering of log calls for specific debug modules.
Format	String, list of module names separated by a comma.
Default Value	NA
Range	
Example	BluStar Settings: DBG_Modules=SESN, CALL

Debug Modules	Description
APPE	GUI appearance, line manager functionality
AURL	curl IPC debugging
CALL	trace ViPrCall class
CERT	curl IPC debugging, SSL errors
CONT	IPC contacts
DIRC	IPC directory debugging
FOLD	debugging AB folder (base class for personal and global folders, contacts and directory)
IPCD	IPC debugging
NOTI	IPC notifications debugging
PRES	IPC presence debugging
PROF	curl IPC debugging, profiling
SESN	curl IPC session debugging
SETS	curl IPC settings debugging
SETU	user settings debugging
STUB	stub debugging
SWUD	auto update class
TOOL	debug settings screen

Parameter – *DBG_LogLevel*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	Sets the debug log level. There are 10 debug log levels for the modules. **Note:** The debug log level must be less than or equal to the system-wide log level for the debug module logging to output.
Format	Integer
Default Value	1 (Fatal Error)
Range	
Example	BluStar Settings: DBG_LogLevel=2

#	Log Level
0	Always
1	Fatal Error
2	Serious Error
3	Minor Error
4	Warning
5	Info
6	Verbose
7	Debug Level 1
8	Debug Level 2
9	Debug Level 3

Parameter – *DBG_WriteToFlag*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg
Description	A mask that controls the data path(s) for the debug logging data.
Format	Boolean
Default Value	0 (disabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	BluStar Settings: DBG_WriteToFlag=1

Feedback Application Settings

Parameter – *enable user feedback*	**Configuration Files** – aastra.cfg, <model>.cfg, <mac>.cfg, <user>.cfg
Description	This administrator parameter enables or disables the feedback application located in the apps menu on the BluStar device.
Format	Boolean
Default Value	1 (enabled)
Range	0-1 0 (disabled) 1 (enabled)
Example	enable user feedback: 0

Appendix B
Sample Configuration Files

This section consists of the sample configuration files necessary to configure the BluStar. The general format is similar to the configuration files used by several Unix-based programs. Any text following a number sign (#) on a line is considered to be a comment, unless the # is contained within double-quotes. Currently, Boolean fields use “0” for false and “1” for true.

Aastra.cfg

aastra.cfg

```
language name: French
time zone name: us-eastern
```

<model>.cfg

8000i.cfg or 8000icr.cfg

```
pbx mode:1
user config URL: http://configserver1/aastracfg
```

<Mac>.cfg

00085D112233.cfg

```
update url: HTTP://configserver1/aastracfg
```

<user>.cfg

jdoe.cfg

```
directory 1:ftp://configserver1/usercfg/global.csv
directory 2:ftp://configserver1/usercfg/30401.csv
sip auth name:30401
sip display name:John Doe
sip password:30401
sip proxy ip:10.55.102.190
sip proxy port:5060
sip registrar ip:10.55.102.190
sip registrar port:5060
sip screen name:John Doe
sip screen name 2:30401
sip user name:30401
```

Appendix C
OpenVPN Configuration

This example is applicable for an OpenVPN implementation using Fedora 13. The commands or file locations will be different depending on the respective OS or Linux distribution being employed. IPs and directories in the following examples should be changed to suit your own needs.

Note:
For further information on how to configure OpenVPN to your specific needs, please refer to the OpenVPN HOWTO website.

Server Requirements

The basic requirements for implementing OpenVPN include the following:

- Physical server (with Fedora 13 installed) for use as the OpenVPN and Apache HTTP server:
  - OpenVPN requirements:
    - Two ethernet cards (eth0 and eth1)
    - Utilizing the UDP protocol
    - Utilizing the default port of 1194
  - Apache HTTP requirements:
    - Utilizing the TCP protocol
    - Utilizing the default port of 443
- Optional - DHCP server (for client IP address configuration)
- Optional - Internal DNS server (for resolving internal FQDNs to internal IPs)
- Optional - Public DNS server (for resolving public FQDNs to external IPs)

Note:
It is recommended that the server utilize Gigabit Ethernet network interfaces for better performance.

Physical Server and Network Environment

The following procedure details what steps are needed to configure OpenVPN with regards to the physical server and the corporate network:

1. Install Fedora 13 on the physical server to be used as the OpenVPN and Apache HTTP server.
2. Configure eth0 and eth1 with the respective IP addresses and the desired domain names.
   For example, eth0 - 10.1.1.20 and eth1 - 10.1.1.21.
3. Configure the server to listen on port 443 (for Apache HTTP use).
4. For security purposes, disable the listing directory function enabled by Apache by default. To disable the function:
   a) Open httpd.conf:
      – # vi /etc/httpd/conf/httpd.conf
   b) Find “<Directory "/var/www/html">” and change “Options Indexes FollowSymLinks” to “Options FollowSymLinks”.
   c) Perform a graceful restart:
      – # apachectl graceful

5. Configure forwarding rules for the corporate firewall:
   - For OpenVPN use forward the external IP address, protocol, and port to the eth1 IP, protocol, and port.
     For example, 200.100.100.245, udp/1194 to 10.1.1.21, udp/1194.
   - For Apache HTTP use forward the external IP address, protocol, and port to the eth1 IP, protocol, and port.
     For example, 200.100.100.245, tcp/443 to 10.1.1.21, tcp/443.
6. Configure the server to ensure the vpnclient directory (e.g. /opt/BluStar/www/html/vpnclient) is accessible from https://external ip address/vpnclient/ (e.g. https://200.100.100.245/vpnclient).
   Note:
   This directory will contain tarballs for remote devices.

Configuration Files/Scripts and Certificates/Keys

The following tables detail the configuration files/scripts and generated certificates/keys needed for both the server and client for this particular example.

Server-Side Files	Description
Configuration Files and Scripts	
server.conf	General server configuration file to configure local eth1 IP, listening port, udp protocol, etc.
bridge-start bridge-stop	Linux scripts to start and stop ethernet bridging.
iptables.txt	File containing the iptable rules allowing for packets to flow freely between clients and server.
Generated Certificates/Keys	
ca.crt ca.key	SSL/TLS root CA certificate and root CA key. **Note:** The server and clients will share the same ca.crt file.
server.key server.crt	Server certificate and server key.
dh1024.pem (server only)	Diffie Hellman parameters.
ta.key	HMAC firewall key to help block DDoS attacks and UDP port flooding. **Note:** The server and client will share the same ta.key file.

Client-Side Files	Description
Configuration Files and Scripts	
client.conf	General client configuration file to configure remote FQDN/IP, listening port, udp protocol, etc.
up.sh down.sh dhclient-tap0.tpl dhclient-tap0.sh	Linux scripts for DHCP-related tasks.
Generated Certificates/Keys	
ca.crt	SSL/TLS root CA certificate. **Note:** The server and clients will share the same ca.crt file.
client.key client.crt	Client certificate and client key.
ta.key	HMAC firewall key to help block DDoS attacks and UDP port flooding. **Note:** The server and client will share the same ta.key file.

Creating the Server-Side Sample Configuration Files/Scripts

The following server-side sample configuration files/scripts are required for this example and can be used as a guideline when configuring OpenVPN for your network. Cut and paste the applicable lines of code into the text editor of your choice and save the file using the respective filename.

Note:
All server-side sample configuration files/scripts for this example should be placed in the /etc/openvpn directory.

Sample server.conf

```
local 10.1.1.21
port 1194
proto udp
dev tap0
ca ca.crt
cert server.crt
key server.key
dh dh1024.pem
server-bridge
client-to-client
duplicate-cn
keepalive 10 120
tls-auth ta.key 0
comp-lzo
persist-key
persist-tun
status openvpn-status.log
verb 4
mute 20
tun-mtu 1500
mssfix
fragment 1300
log /var/log/openvpn.log
```

Note:
For detailed functional descriptions of the above server.conf parameters, please refer to the OpenVPN HOWTO website.

Sample bridge-start

```
#!/bin/bash

#################################
# Set up Ethernet bridge on Linux
# Requires: bridge-utils
#################################

# Define Bridge Interface
br="br0"

# Define list of TAP interfaces to be bridged,
# for example tap="tap0 tap1 tap2".
tap="tap0"

# Define physical ethernet interface to be bridged
# with TAP interface(s) above.
eth="eth1"
eth_ip="10.1.1.21"
eth_netmask="255.255.255.0"
eth_broadcast="10.1.1.255"

for t in $tap; do
    openvpn --mktun --dev $t
done

brctl addbr $br
brctl addif $br $eth

for t in $tap; do
    brctl addif $br $t
done

for t in $tap; do
    ifconfig $t 0.0.0.0 promisc up
done

ifconfig $eth 0.0.0.0 promisc up

ifconfig $br $eth_ip netmask $eth_netmask broadcast $eth_broadcast
```

Sample bridge-stop

```
#!/bin/bash

####################################
# Tear Down Ethernet bridge on Linux
####################################

# Define Bridge Interface
br="br0"

# Define list of TAP interfaces to be bridged together
tap="tap0"

ifconfig $br down
brctl delbr $br

for t in $tap; do
    openvpn --rmtun --dev $t
done
```

Sample iptables.txt

```
iptables -I INPUT -i tap0 -j ACCEPT
iptables -I INPUT -i br0 -j ACCEPT
iptables -I FORWARD -i br0 -j ACCEPT
iptables -I INPUT -p tcp -m tcp --dport 1194 --tcp-flags FIN,SYN,RST,ACK SYN -j
ACCEPT
iptables -I INPUT -p udp -m udp --dport 1194 -j ACCEPT
#iptables -I FORWARD -m physdev --physdev-in tap0 -j DROP
#iptables -I FORWARD -m physdev --physdev-in tap0 -m mac --mac-source
70:71:BC:88:12:7D -j ACCEPT
```

Note:

The following lines of code will be seperated onto two lines when cut and pasted into your text editor:

```
#iptables -I FORWARD -m physdev --physdev-in tap0 -m mac --mac-source
70:71:BC:88:12:7D -j ACCEPT
```

The above lines are in fact one line and should be merged together manually in your text editor.

Installing the OpenVPN Server and Creating Certificates/Keys

When the above server-side configuration files/scripts have been created, enter the following commands to install the OpenVPN server and create the necessary certificates/keys and directories:

```
# yum install openvpn bridge-utils

# cd /usr/share/openvpn/easy-rsa/2.0
# . ./vars
#./clean-all
#./build-ca
#./build-dh
#./build-key-server server
#./build-key client
# /usr/sbin/openvpn --genkey --secret keys/ta.key

# cd keys
# cp ca.crt ca.key server.key server.crt dh1024.pem ta.key /etc/openvpn

# mkdir –p /opt/BluStar/www/html/vpnclient/client
# cp ca.crt client.key client.crt ta.key /opt/BluStar/www/html/vpnclient/client
# ln -snf /opt/BluStar/www/html/vpnclient/ /var/www/html/
```

Note:

After the following commands are executed you will be asked to additional information such as city, organization, etc.:

```
#./build-ca
#./build-key-server server
#./build-key client
```

Specific values can be entered, or the default can be selected by simply pressing the Enter key.

Creating the Client-Side Sample Configuration Files/Scripts

The following client-side sample configuration files/scripts are required for this example and can be used as a guideline when configuring OpenVPN for your network. Cut and paste the applicable lines of code into the text editor of your choice and save the file using the respective filename.

Note:
All client-side sample configuration files/scripts for this example should be placed in the /opt/BluStar/www/html/vpnclient/client directory.

Sample client.conf

```
client
dev tap0
proto udp
remote 200.100.100.245 1194
resolv-retry infinite
nobind
persist-key
persist-tun
ca ca.crt
cert client.crt
key client.key
ns-cert-type server
tls-auth ta.key 1
comp-lzo
verb 3
mute 1
script-security 2
up "./up.sh"
down "./down.sh"
log /var/log/openvpn.log
tun-mtu 1500
mssfix
fragment 1300
```

Note:
For detailed functional descriptions of the above client.conf parameters, please refer to the OpenVPN HOWTO website.

Sample up.sh

```
#!/bin/sh
echo `date`: VPN channel is up! param: $@
/etc/openvpn/dhclient-tap0.sh up 2>&1 &
```

Sample down.sh

```
#!/bin/sh
echo `date`: VPN channel is down! param: $@
/etc/openvpn/dhclient-tap0.sh down 2>&1 &
```

Sample dhclient-tap0.tpl

```
send dhcp-parameter-request-list 1,2,3,6,7,12,15,28,40,41,42,43,66,159,160;
send vendor-class-identifier "AastraBluStar8000i-vpn";
send host-name "BluStarHost-tap0";
```

Sample dhclient-tap0.sh

```
#!/bin/sh
CONFDIR=/etc/openvpn
DHDIR=/var/lib/dhclient
case "$1" in
   up)
kill -9 `cat $DHDIR/dhclient-tap0.pid`
sleep 3
eth0mac=`/sbin/ifconfig eth0|grep eth0|awk '{print $5}'`
echo `date`: set tap0 mac as $eth0mac
/sbin/ip link set dev tap0 address $eth0mac
/sbin/ifconfig tap0 0.0.0.0 up
route=`/sbin/route -n|grep ^0.0.0.0|awk '{print $2}'`
echo `date`: trying to run dhcp for tap0. default gw:$route
cat $CONFDIR/dhclient-tap0.tpl > $DHDIR/dhclient-tap0.conf
rm -f $DHDIR/dhclient-tap0.leases
serverip=`cat $CONFDIR/client.conf|grep ^remote|awk '{print $2}'`
echo `date`: trying to reserve route for server:$serverip
/sbin/route add -host $serverip gw $route
/sbin/dhclient -1 -q -cf $DHDIR/dhclient-tap0.conf -lf $DHDIR/dhclient-
tap0.leases -pf $DHDIR/dhclient-tap0.pid tap0
      ;;
   down)
target=`/sbin/route|grep UGH|head -1|awk '{print $1}'`
route=`/sbin/route|grep UGH|head -1|awk '{print $2}'`
echo `date`: trying to take down tap0. default gw:$route
/sbin/route del $target
/sbin/route add default gw $route
kill -9 `cat $DHDIR/dhclient-tap0.pid`
rm -f $DHDIR/dhclient-tap0.leases
# restore predhclient config
cd $DHDIR
for file in *.predhclient.tap0; do
    echo cp -f $file /etc/${file%.predhclient.tap0}
    cp -f $file /etc/${file%.predhclient.tap0}
done
      ;;
   *)
      echo "$0 up|down"
        ;;
esac
exit 0
```

Note:
The following lines of code will be seperated onto two lines when cut and pasted into your text editor:

```
/sbin/dhclient -1 -q -cf $DHDIR/dhclient-tap0.conf -lf $DHDIR/dhclient-
tap0.leases -pf $DHDIR/dhclient-tap0.pid tap0
```

The above lines are in fact one line and should be merged together manually in your text editor.

Preparing the Ethernet Bridge and Firewall Rules

Before executing the ethernet bridge, ensure (for this particular example) the server configuration files/scripts are located in /etc/openvpn/ and the client configuration files/scripts are located in opt/BluStar/www/html/vpnclient/client/.

Enter the following commands to prepare the ethernet bridge and firewall rules:

```
# cd /etc/openvpn
# vi server.conf
```

Note:
Ensure the "local x.x.x.x" parameter is configured properly as per your server's local IP.

```
# vi bridge-start
```

Note:
Ensure the following parameters are configured properly as per your server network interface's settings:

- eth
- eth_ip
- eth_netmask
- eth_broadcast

```
# sh ./bridge-start
# vi iptables.txt
```

Note:
For enhanced security, the last two lines in iptables.txt can be uncommented and the MAC address can be configured to only allow internal network access to specific devices.

```
# sh iptables.txt
```

Note:
For more information about the above commands and ethernet bridging, please refer to the OpenVPN Ethernet Bridging website.

Starting the OpenVPN Service

Enter the following command to start the OpenVPN service.

```
# service openvpn start
```

When the service has started, typing `ifconfig` should reveal details for br0, eth0, eth1, lo, and tap0.

In this example, the openvpn.log file in the /var/log/ directory can be viewed for errors.

Preparing the Configuration Tarball for Remote Devices

Enter the following commands to prepare the configuration tarball for remote devices:

```
# cd /opt/BluStar/www/html/vpnclient/client
# vi client.conf
```

Note:

Ensure the "remote x.x.x.x 1194" parameter is configured properly as per your external IP to internal IP mapping and port on the server. It is recommended to use the IP address if issues occur when using the FQDN.

```
# chmod 755 *.sh
# cd ..
# tar zcvf client.tgz client
```

For security purposes, it is recommended that the resulting client.tgz file be renamed to something random. Enter the following commands to rename the file ("client-8X5D8WE23" can be replaced with any unique filename):

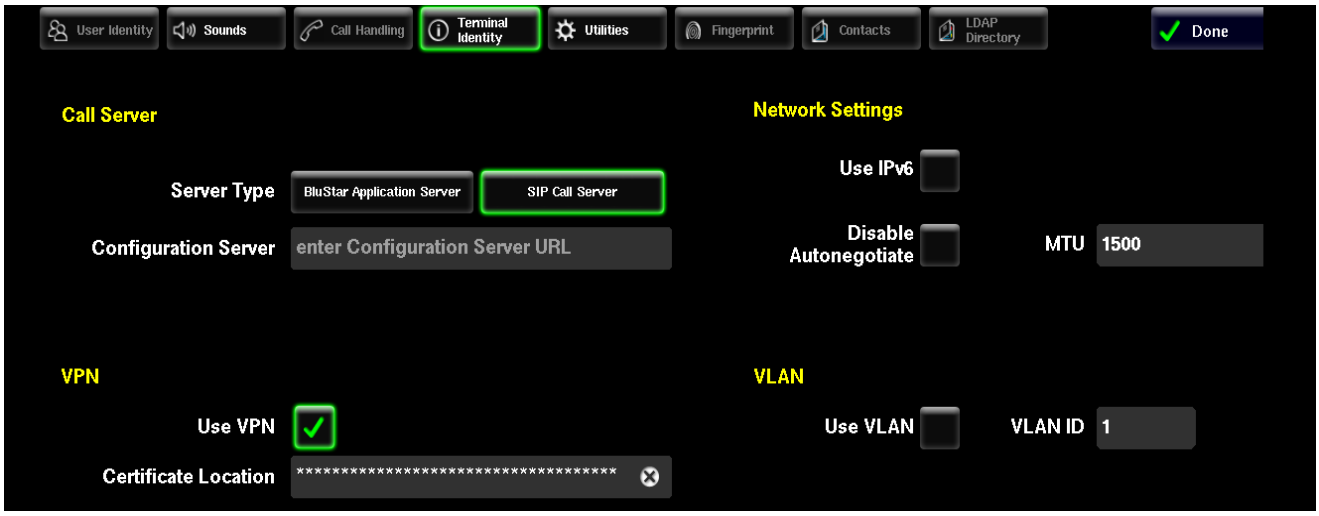
```
# mv client client-8X5D8WE23
# tar zcvf client-8X5D8WE23.tgz client-8X5D8WE23
```

After creating the configuration tarball, open a browser window on your PC and try to download the newly created tarball from the configured URI (e.g. https://200.100.100.245/vpnclient/client-8X5D8WE23.tgz)

If any errors occur, ensure the Apache HTTP server settings, external firewall mappings, and/or iptables settings are configured correctly.

Configuring the BluStar Device to Enable VPN

To configure the BluStar device to enable VPN:



1. On the respective BluStar device, select **App Menu > Tools > Terminal Identity > Advanced**.
2. Under **VPN** enter the location of the client tarball file in the **Certificate Location** field.
3. Select **Use VPN** to enable the VPN client.
4. Select the **Back** button to return to the main terminal identity screen.
5. Select **Done** and then **Restart** to restart the BluStar device and allow the changes to take effect.

Limited Warranty

(Not applicable in Australia – see below for Limited Warranty in Australia)

Aastra warrants this product against defects and malfunctions in accordance with Aastra's authorized, written functional specification relating to such products during a one (1) year period from the date of original purchase ("Warranty Period"). If there is a defect or malfunction, Aastra shall, at its option, and as the exclusive remedy, either repair or replace the product at no charge, if returned within the Warranty Period. If replacement parts are used in making repairs, these parts may be refurbished, or may contain refurbished materials. If it is necessary to replace the product, it may be replaced with a refurbished product of the same design and color. If it should become necessary to repair or replace a defective or malfunctioning product under this warranty, the provisions of this warranty shall apply to the repaired or replaced product until the expiration of ninety (90) days from the date of pick up, or the date of shipment to you, of the repaired or replacement product, or until the end of the original Warranty Period, whichever is later. Proof of the original purchase date is to be provided with all products returned for warranty repairs.

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Aastra shall not be liable for any incidental or consequential damages, including, but not limited to, loss, damage or expense directly or indirectly arising from the customer's use of or inability to use this product, either separately or in combination with other equipment. This paragraph, however, shall not apply to consequential damages for injury to the person in the case of products used or bought for use primarily for personal, family or household purposes.

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Should the product fail during the Warranty Period;

- **In North America,** please call 1-800-574-1611 for further information.
- **Outside North America**, contact your sales representative for return instructions.

You will be responsible for shipping charges, if any. When you return this product for warranty service, you must present proof of purchase.

After Warranty Service

Aastra offers ongoing repair and support for this product. This service provides repair or replacement of your Aastra product, at Aastra's option, for a fixed charge. You are responsible for all shipping charges. For further information and shipping instructions:

- **In North America**, contact our service information number: 1-800-574-1611.
- **Outside North America**, contact your sales representative.

Note:
Repairs to this product may be made only by the manufacturer and its authorized agents, or by others who are legally authorized. This restriction applies during and after the Warranty Period. Unauthorized repair will void the warranty.

Limited Warranty (Australia Only)

The benefits under the Aastra Limited Warranty below are in addition to other rights and remedies to which you may be entitled under a law in relation to the products.

In addition to all rights and remedies to which you may be entitled under the *Competition and Consumer Act 2010* (Commonwealth) and any other relevant legislation, Aastra warrants this product against defects and malfunctions in accordance with Aastra's authorized, written functional specification relating to such products during a one (1) year period from the date of original purchase ("Warranty Period"). If there is a defect or malfunction, Aastra shall, at its option, and as the exclusive remedy under this limited warranty, either repair or replace the product at no charge, if returned within the Warranty Period.

Repair Notice

To the extent that the product contains user-generated data, you should be aware that repair of the goods may result in loss of the data. Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods. If it is necessary to replace the product under this limited warranty, it may be replaced with a refurbished product of the same design and color.

If it should become necessary to repair or replace a defective or malfunctioning product under this warranty, the provisions of this warranty shall apply to the repaired or replaced product until the expiration of ninety (90) days from the date of pick up, or the date of shipment to you, of the repaired or replacement product, or until the end of the original Warranty Period, whichever is later. Proof of the original purchase date is to be provided with all products returned for warranty repairs.

Exclusions

Aastra does not warrant its products to be compatible with the equipment of any particular telephone company. This warranty does not extend to damage to products resulting from improper installation or operation, alteration, accident, neglect, abuse, misuse, fire or natural causes such as storms or floods, after the product is in your possession. Aastra will not accept liability for any damages and/or long distance charges, which result from unauthorized and/or unlawful use.

To the extent permitted by law, Aastra shall not be liable for any incidental damages, including, but not limited to, loss, damage or expense directly or indirectly arising from your use of or inability to use this product, either separately or in combination with other equipment. This paragraph, however, is not intended to have the effect of excluding, restricting or modifying the application of all or any of the provisions of Part 5-4 of Schedule 2 to the Competition and Consumer Act 2010 (**the ACL**), the exercise of a right conferred by such a provision or any liability of Aastra in relation to a failure to comply with a guarantee that applies under Division 1 of Part 3-2 of the ACL to a supply of goods or services.

This express warranty sets forth the entire liability and obligations of Aastra with respect to breach of this express warranty and is in lieu of all other express or implied warranties other than those conferred by a law whose application cannot be excluded, restricted or modified. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Warranty Repair Services

Procedure: Should the product fail during the Warranty Period and you wish to make a claim under this express warranty, please contact the Aastra authorized reseller who sold you this product (details as per the invoice) and present proof of purchase. You will be responsible for shipping charges, if any.

Manufacturer: Aastra Telecom Australia Pty Ltd
745 Springvale Road
Mulgrave VIC 3170
ABN 16 140 787 195
Phone: +61 3 8562 2700

Limitation of Liability for Products not of a kind ordinarily acquired for personal, domestic or household use or consumption (e.g. goods/services ordinarily supplied for business-use)

1.1 To the extent permitted by law and subject to clause 1.2 below, the liability of Aastra to you for any non-compliance with a statutory guarantee or loss or damage arising out of or in connection with the supply of goods or services (whether for tort (including negligence), statute, custom, law or on any other basis) is limited to:

- **a)** in the case of services:
  - **i)** the resupply of the services; or
  - **ii)** the payment of the cost of resupply; and
- **b)** in the case of goods:
  - **i)** the replacement of the goods or the supply of equivalent goods; or
  - **ii)** the repair of the goods; or
  - **iii)** the payment of the cost of replacing the goods or of acquiring equivalent goods; or
  - **iv)** the payment of the cost of having the goods repaired.

1.2 Clause 1.1 is not intended to have the effect of excluding, restricting or modifying:

- **a)** the application of all or any of the provisions of Part 5-4 of Schedule 2 to the Competition and Consumer Act 2010 (**the ACL**); or
- **b)** the exercise of a right conferred by such a provision; or
- **c)** any liability of Aastra in relation to a failure to comply with a guarantee that applies under Division 1 of Part 3-2 of the ACL to a supply of goods or services.

After Warranty Service

Aastra offers ongoing repair and support for this product. If you are not otherwise entitled to a remedy for a failure to comply with a guarantee that cannot be excluded under the Australian Consumer Law, this service provides repair or replacement of your Aastra product, at Aastra's option, for a fixed charge. You are responsible for all shipping charges. For further information and shipping instructions contact:

Aastra Telecom Australia Pty Ltd
745 Springvale Road
Mulgrave VIC 3170
ABN 16 140 787 195
Phone: +61 3 8562 2700

Note:
Repairs to this product may be made only by the manufacturer and its authorized agents, or by others who are legally authorized. Unauthorized repair will void this express warranty.

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